

Directory to the
Birds of
Eastern North America

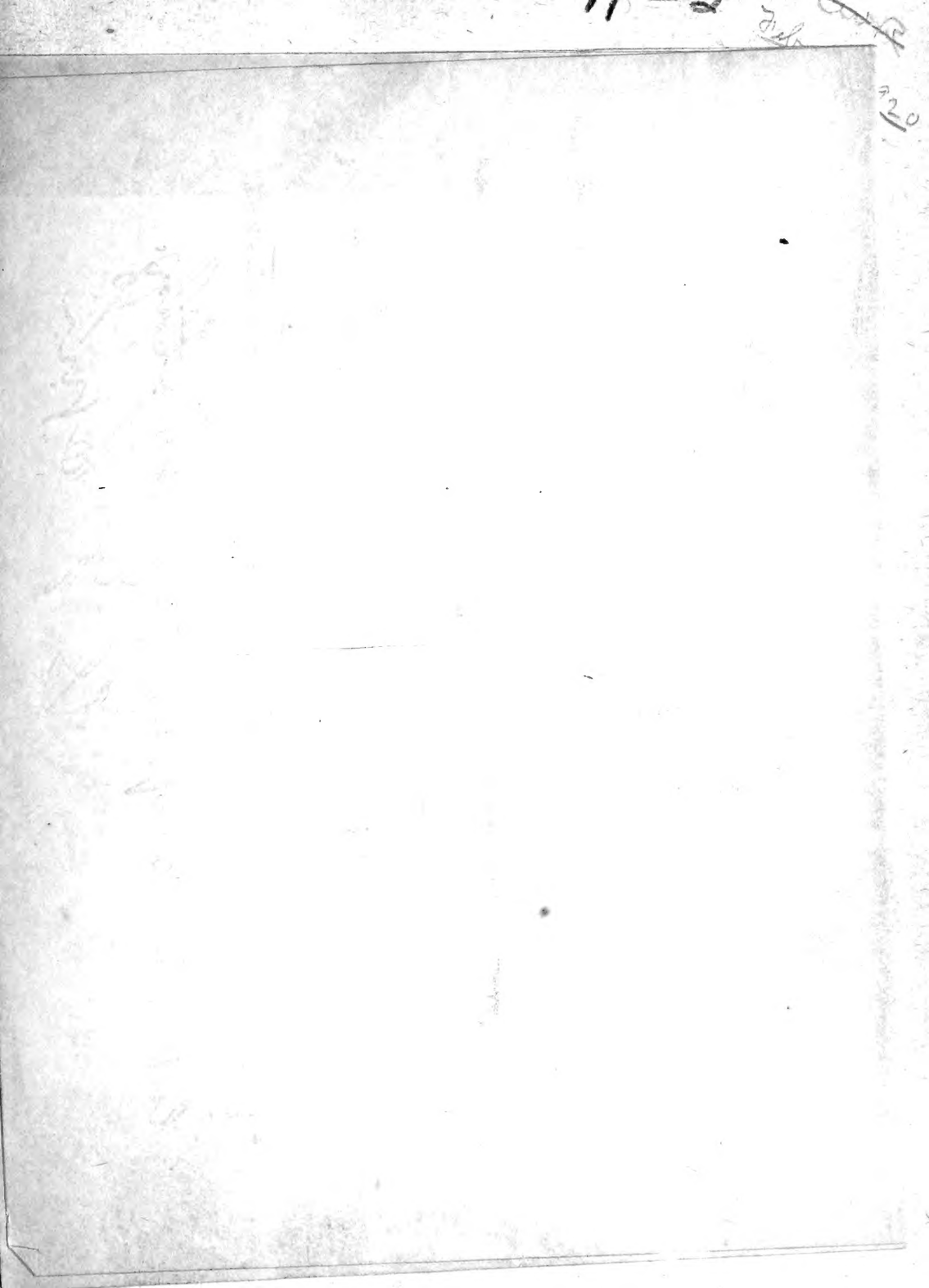
MAYNARD



2^d edition.

The only alterations in this edition are the addition of the "Forewords" and "Preface", "Key to Wood Cuts", "Addenda including Corrections", and "appendix" (pp. 321-326).

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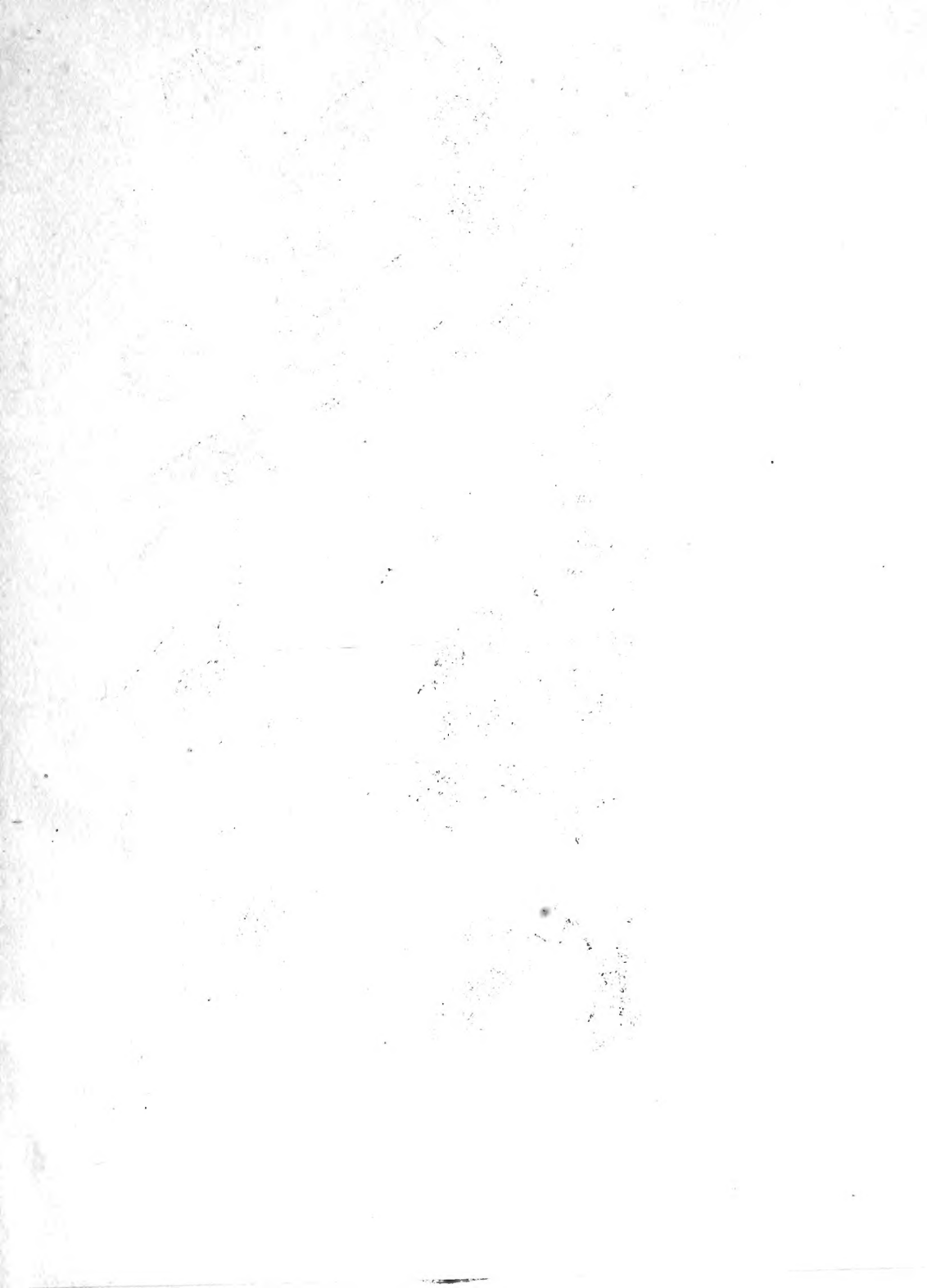
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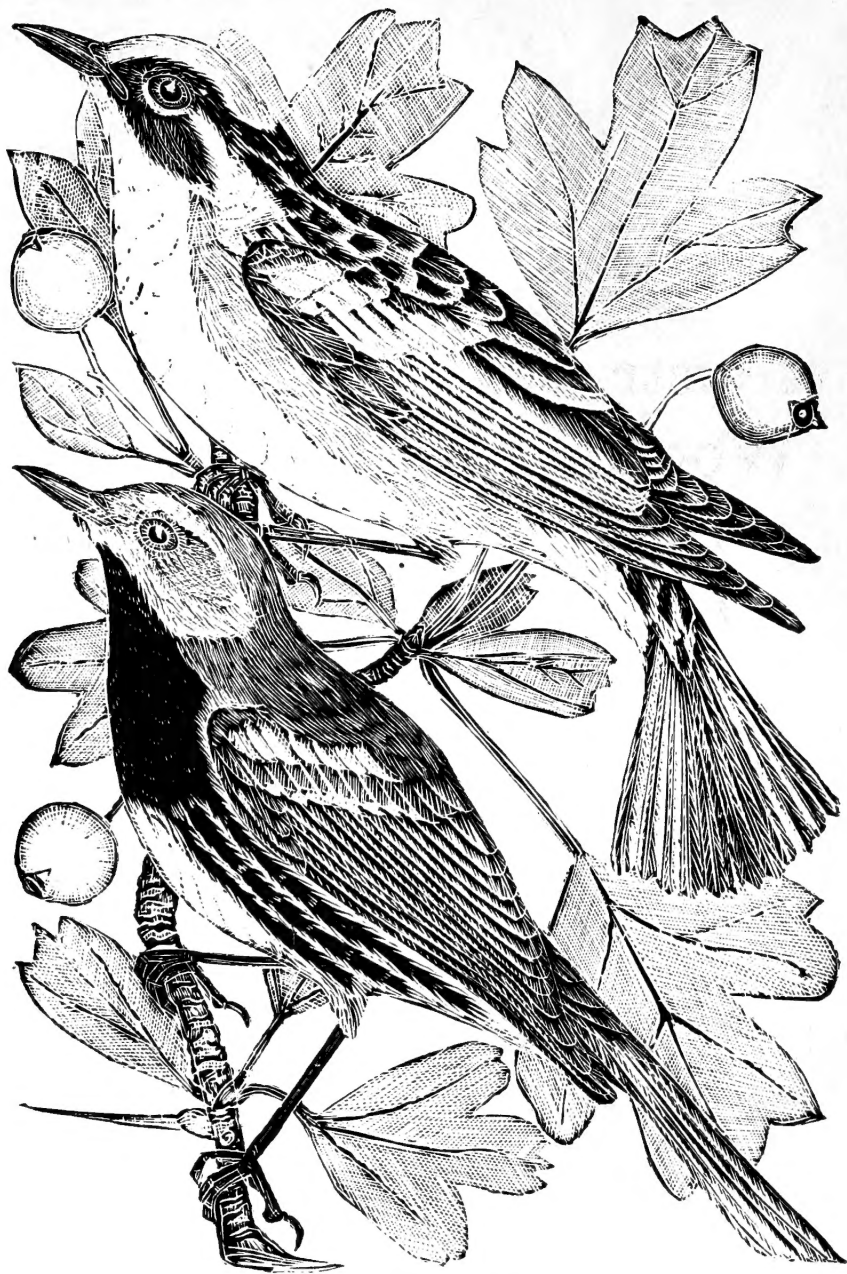
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Feb. 10, 1920





FRONTISPIECE.



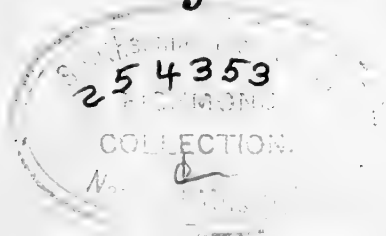
Upper fig., CHESTNUT-SIDED WARBLER; lower, BLACK THROATED GREEN

**DIRECTORY TO THE
BIRDS OF EASTERN
NORTH AMERICA**

Illustrated with Many
Wood Cuts and Twenty
Plates Drawn and En-
graved by the Author
By Charles J. Maynard



West Newton Mass.
C. J. Maynard 1907



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Dec. 26, 1905,

April 12, 1906,

Oct. 2, 1906,

Dec. 18, 1906,

Feb. 16, 1907,

April 22, 1907,

Oct. 11, 1907,

By C. J. Maynard.

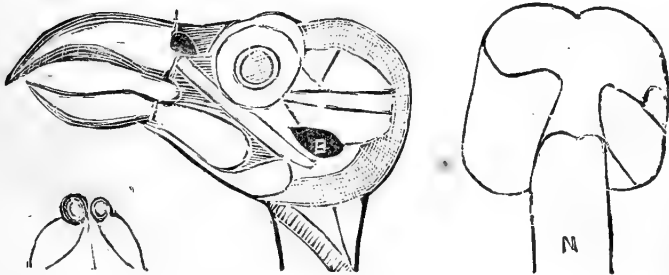
Forewords.

For several reasons the present edition of the DIRECTORY has been delayed until the present time, but as this delay has given an opportunity to add a few species to the book, something is gained thereby. These additions will be found in an Appendix.

The original title page, bearing the date of 1907, has been retained.

Oct. 1918.

* * * *



Unsymmetrical skull of American Crossbill, from Sparrows and Finches of New England.



Man o' War Bird. 1-12. See page 36.

P R E F A C E .

The basis of the present volume is the Directory published in 1907, but to this has been added a Key to the Wood Cuts and an Appendix in which are given recently described birds and those omitted before for one reason or another. Thus this book stands squarely abreast of the present time.

Although a Key to the Cuts has been added, I trust that this will be used only as a confirmation of the reader's identification of the cuts by study of the different orders, families, and genera, as advised in the Introduction. The true way to know birds is to learn in the beginning the relationship of each and its place in the great natural system, and with a little patient study this knowledge is very easily acquired. We may liken an order to a state, a family to a city in it, a genus to a city street upon which the numbered species live, and thus the reason for applying the name Directory to this book becomes apparent.

MAY, 1912.

Key to Wood Cuts.

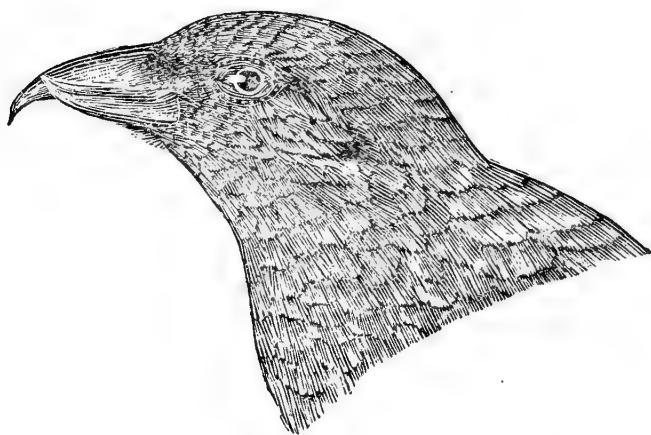
| | |
|-------------------------------|----------------------------|
| 1, 2, 6 Grebe, pied-billed | 62, 63 common |
| 3, 5 horned | 64, 65 Forster's |
| 4 Holboell's | 66 roseate |
| 7, 8 Loon | 67 least |
| 9, 10 red-throated | 68 bridled |
| 11, 12 Razor-billed Auk. | 69 sooty |
| 13 Murre | 70 short-tailed |
| 14 Brunnich | 71 noddy |
| 15 Black guillemot | 72 Black skimmer |
| 16 Dovekie | 73, 74, 75 Phalarope, red |
| 17 Puffin | 76, 77, 78 Wilson's |
| 18, 19 Fulmar | 79, 80 northern |
| 20 Shearwater, Audubon's | 81 American avocet |
| 21 greater | 82 Black-necked stilt |
| 22, 23 Petrel, Leache's | 83, 86 Wilson's snipe |
| 24, 25 Wilson's | 84, 85 Woodcock |
| 26, 30 Gannet | 87 Dowitcher |
| 27, 28, 29 Tropic bird | 89 Knot |
| 31 Pelican, white | 88 Sandpiper, stilt |
| 32 brown | 90 purple |
| 33, 34 D'bl-crested cormorant | 91 White-rumped |
| 35 Anhinga | 92 curlew |
| 36, 37 Man o' war bird | 93 Sanderling |
| 38 Bonaparte's Gull | 94 Lesser yellow-legs |
| 40 Skua | 95 Solitary sandpiper |
| 41 Jaeger, pomarine | 96 Willet |
| 39, 42, 43 parasitic | 97 Ruff |
| 44 long-tailed | 98 Sandpiper, Bartramian |
| 45, 47 Gull, kittiwake | 99, buff-breasted |
| 48 great black-backed | 100 spotted |
| 40, 50 herring | 101 Godwit, marbled |
| 51 American herring | 102 Hudsonian |
| 52 ring-billed | 103 Curlew, long-billed |
| 53, 54 laughing | 104 Hudsonian |
| 55 Bonaparte's | 105 Esquimo |
| 56 rosy | 106. Plover, black-bellied |
| 57 Sabine's | 107 golden |
| 58, 59 Tern, marsh | 108 killdeer |
| 60 Caspian | 109 semipalmated |
| 61 Cabot's | 110 piping |

- | | |
|--------------------------------|-----------------------------|
| 111 Turnstone | 157 Bufflehead |
| 112 Oystercatcher | 158 Oldsquaw |
| 113 Roseate spoonbill | 159 Harlequin |
| 114, Ibis, white | 160 Eider, American |
| 115 glossy | 161 northern |
| 116, 117 Bittern, American | 162 king |
| 118 least | 163 Scoter, American |
| 119 Heron, Ward's | 164 surf |
| 120 white | 165 white-winged |
| 121 Snowy egret | 166, 167 Duck, ruddy |
| 122 Heron, Louisiana | 168 masked |
| 123 little blue | 169 Goose, blue |
| 124 green | 170 lesser snow |
| 125 black-crowned night | 171 American white-fronted |
| 126 yellow-crowned night | 172 Canada |
| 127 Wood ibis | 173 barnacle |
| 128 Sandhill crane | 174 Brant |
| 129 Limpkin | 175 American flamingo |
| 130 Rail, king | 176 Bobwhite |
| 131 clapper | 177 Grouse, spruce |
| 132 sora | 178 ruffed |
| 133 Gallinule, Florida | 189, 180 Willow ptarmigan |
| 134 purple | 181, 182 Prairie hen |
| 135, 136 American coot | 183 Heath hen |
| 136, 137 Merganser, American | 184 Wild pigeon |
| 138 red-breasted | 185 Dove, mourning |
| 139 hooded | 186 ground |
| 140 Smew | 187, 187* Vulture, turkey |
| 141 Mallard | 188, 188* black |
| 142 Duck, black | 189, 189* Kite, Mississippi |
| 143 red-legged black | 190, 190* Swallow-tailed |
| 144 Gadwall | 191 Everglade |
| 145 Baldpate | 192 Marsh hawk |
| 146 Teal, green-winged | 193 White Gyrfalcon |
| 147 blue-winged | 194 Hawk, duck |
| 148 Shoveller | 195 pigeon |
| 149 Pintail | 196 sparrow |
| 150 Wood duck | 197, 197* sharp-shinned |
| 151 Redhead | 198, 198* Cooper's |
| 152 Canvas-back | 200, 200* red-tailed |
| 153, 154 Lesser Scaup | 201, 201* red-shouldered |
| 155 Golden-eye, American | 202 Am. rough-legged |
| 156 Barrow's | 203 Eagle, golden |

| | |
|-------------------------------|------------------------------|
| 204 Bald eagle | 248 Horned lark |
| 205 American osprey | 249 Crow |
| 206 Audubon's caracara | 250 Skylark |
| 207 Carolina parakeet | 251 Magpie |
| 208 Owl, barn | 252 Jay, blue |
| 209 barred | 253 Florida |
| 210 long-eared | 254 Canada |
| 211 short-eared | 255 Chickadee, |
| 212 great-horned | 256 Carolina |
| 213 screech | 257 Hudsonian |
| 214 saw-whet | 258 Tufted titmouse |
| 215 hawk | 259 Crow |
| 216 snowy | 260 Raven |
| 217 Cuckoo, yellow-billed | 261 Starling |
| 218 black-billed | 262 Meadow lark |
| 219 Yellow-bellied sapsucker | 263 Oriole, Baltimore |
| 220 Woodpecker, red-bellied | 264 orchard |
| 221 red-headed | 265 Blackbird, yellow-headed |
| 222 hairy | 266 rusty |
| 223 downy | 267 Brewer's |
| 224 cockaded | 368 Grackle, bronzed |
| 225 arctic three-toed | 269 boat-tailed |
| 226 American three-toed | 270 Cowbird |
| 227 ivory-billed | 271 Bobolink |
| 228 pileated | 272 Black-throated Bunting |
| 229 Flicker | 273 Sparrow, chipping |
| 230 Chuck-will's widow | 274 tree |
| 232 Whip-poor-will | 275 field |
| 233 Nighthawk | 376 white-throated |
| 234, 235 Chimney swift | 277 white-crowned |
| 236 Kingfisher | 278 song |
| 237 Kingbird, upper fig: pine | 279 Lincoln's |
| grosbeak, lower fig. | 280 swamp |
| 238, 240 Kingbird | 281 fox |
| 239 Scissor-tailed Flycatcher | 282 Towhee |
| 241 Gray kingbird | 283 Junco |
| 242 Crested flycatcher | 284 Sparrow, pine-woods |
| 243 Phoebe | 285 grasshopper |
| 244 Wood pewee | 296 Henslow's |
| 245 Flycatcher, olive-sided | 287 Leconte's |
| 246 least | 288 seaside |
| 247 green-crested | 289 sharp-tailed |

| | |
|----------------------------|----------------------------|
| 290 Sparrow, savanna | 335 Yellow-breasted chat |
| 291 vesper | 336 Ovenbird |
| 292 lark | 337 Water thrush |
| 293 Bunting, lark | 338 Louisiana water thrush |
| 294 snow | 339 American pipit |
| 295 Lapland longspur | 340, 341 Purple martin |
| 296 Purple finch | 342, 343 Swallow, cliff |
| 297 Pine grosbeak | 344, 345 bank |
| 298 Redpoll's bills | 346, 347 rough-winged |
| 299 Pine siskin | 348 white-bellied |
| 300 Goldfinch | 349 barn |
| 301 Crossbill, american | 350 Waxwing, cedar |
| 302 white-winged | 351 bohemian |
| 303 Grosbeak, evening | 352 Scarlet tanager |
| 304 rose-breasted | 353 Shrike, northern |
| 305 cardinal | 354 loggerhead |
| 306 Indigo Bird | 355 vireo, red-eyed |
| 307 Bahama grassquit | 356 warbling |
| 308 Bahama honey creeper | 357 yellow-throated |
| 309 Warbler, Black & white | 358 solitary |
| 310 Yellow-throated | 359 white-eyed |
| 311 Black-throated blue | 360 key west |
| 312 myrtle | 361 Mockingbird |
| 313 cape may | 362 Catbird, p. 272 |
| 314 magnolia | 363 Brown thrasher |
| 315 cerulean | 364 Wren, carolina |
| 316 chestnut-sided | 365 bewick |
| 317 black-polled | 366 house |
| 318 bay-breasted | 367 winter |
| 319 blackburnian | 368 long-billed marsh |
| 320 black-throated green | 369 short-billed marsh |
| 321 kirtland | 370 Brown creeper |

| | |
|---------------------------|-----------------------------|
| 322 Warbler, pine | 371 Nuthatch, white-bellied |
| 323 yellow redpoll | 372 red-bellied |
| 324 prairie | 328 brown-headed |
| 325 little | 374 Kinglet, ruby-crowned |
| 326 orange-crowned | 375 golden-crowned |
| 327 tennessee | 376 Blue gray gnatcatcher |
| 328 kentucky | 377 Thrush, wood, p, 272 |
| 329 connecticut | 378 hermit |
| 330 mourning | 370 olive-backed |
| 331 Northern yellowthroat | 371 gray-cheeked |
| 332 Warbler, wilson | 372 Robin |
| 333 canadian | 373 Bluebird |
| 334 Redstart | |



White-winged Crossbill. See page 418.

AN INVITATION.

O leave the restless city
And come to the sylvan dell
Where the wood thrush gives his anthem
And the blue jay tolls his bell.

Where, deep in the tangled thicket,
The veery sings a lay
That trembles with whispered longings
Then slowly dies away.

Or go where the tawny hermit
With motif high and strong
Beareth the spirit upward
On the soaring wings of song.

From wooded hill and valley fair,
From plain and sea-girt isle,
A thousand songs rise up to cheer,
And the weary heart beguile.

Then leave the restless city
And come to some forest haunt
Where Nature's breath fills all the air
And sweetly wild birds chant.

INTRODUCTION.

This manual is intended to aid students in identifying birds in the field; hence external characters are chiefly used, and, as far as possible, those only which are conspicuous enough to be seen by the aid of a bird glass at a reasonable distance; while the author has endeavored to avoid using any characters not absolutely necessary for identification.

Characteristic habits and the manner of flight are mentioned; the song, and other notes and cries are also given.

When birds belonging to certain groups have similar habits these are given under group headings; for an example, see page 5, under Grebes.

Groups are indicated by letters in varying type, according to the value of each group, followed by the common and technical name of each. Following is a key to the lettering; **A**, order; **A**, family; **a**, genus. Species are numbered, beginning with 1 under each genus. Sub-species are indicated by the same number as that of the nearest allied species followed by an asterisk (*).

The beginner in bird study should first consult the key to the orders and families, to be found at the end of the book. Having become satisfied that a bird in question belongs to a certain order and family, the student should carefully read the characters of those groups given in the body of the book; then study the generic characters, which on account of their condensed contents are a key in themselves. The genus once found, the species can easily be determined.

The following is an example of the method of using the book: A bird is seen upon a pond or river. It rides lightly on the water, has a short body, and carries the head well back. The bill is short and thick. It has no visible tail. It is dark in color on all of the parts that can be seen above

water, and thus there is no white wing patch. By watching the bird a little while it will be seen to dive often. It also sinks slowly beneath the water, sometimes keeping the head and neck only above the surface.

Keeping this last mentioned habit in mind when consulting the key, it will be seen that there are two groups that possess the power of sinking slowly beneath the water; the Grebes and Anhingas. The latter named are confined to the southern part of the United States and southward, and have long bodies and tails. Hence the Grebes, with their short, tailless bodies, remain, regardless of the location in which the bird in question is observed; and upon reading the characters of the order, given on page 11, it becomes evident that our bird belongs to this group. Under family characters, which should now be consulted, it will be found that the bird is not a Slender-billed Grebe, as all of these not only have slender bills but also a white wing patch, and other characters given do not agree with our observations. Hence we find that our bird must belong to the Thick-billed Grebes, and consequently, there being but a single species, must be a Pied-billed Grebe. By reading the description of this species it will be found to agree with the facts observed.

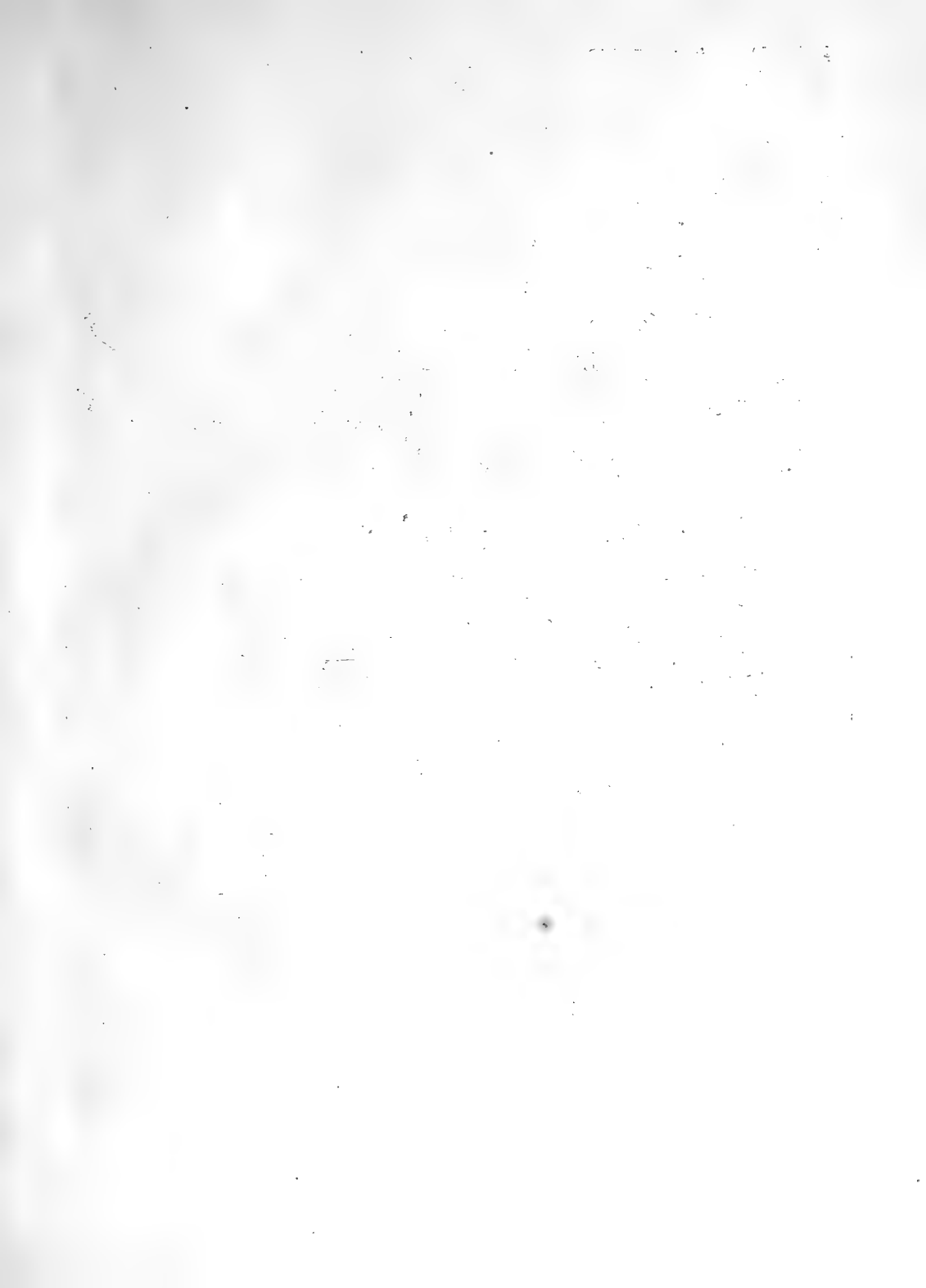
We have ascertained that the Pied-billed Grebe belongs to **A**, the order of Grebes; **B**, the family of Thick-billed Grebes; **a**, the genus of Black-throated Grebes; it is species No. 1 in this genus. This species is always designated in this book as, **A, B, a, 1**; a method which links the species with its order, family, and genus, and no other species has exactly this same combination of letters and number, for the letter of the order is never repeated. For examples of this method as applied to the Pied-billed Grebe, see letters and figures under figs. 1, 2, and 6. Additional fractional figures, as 1-15 under fig. 1, indicate the comparative size of the figure to that of the life-sized bird, thus it will be seen that the cut of the Pied-billed Grebe is only one fifteenth the size of life. Figures that do not have the fraction following the specific number are life-sized; examples, figs. 4, 5, and 6.

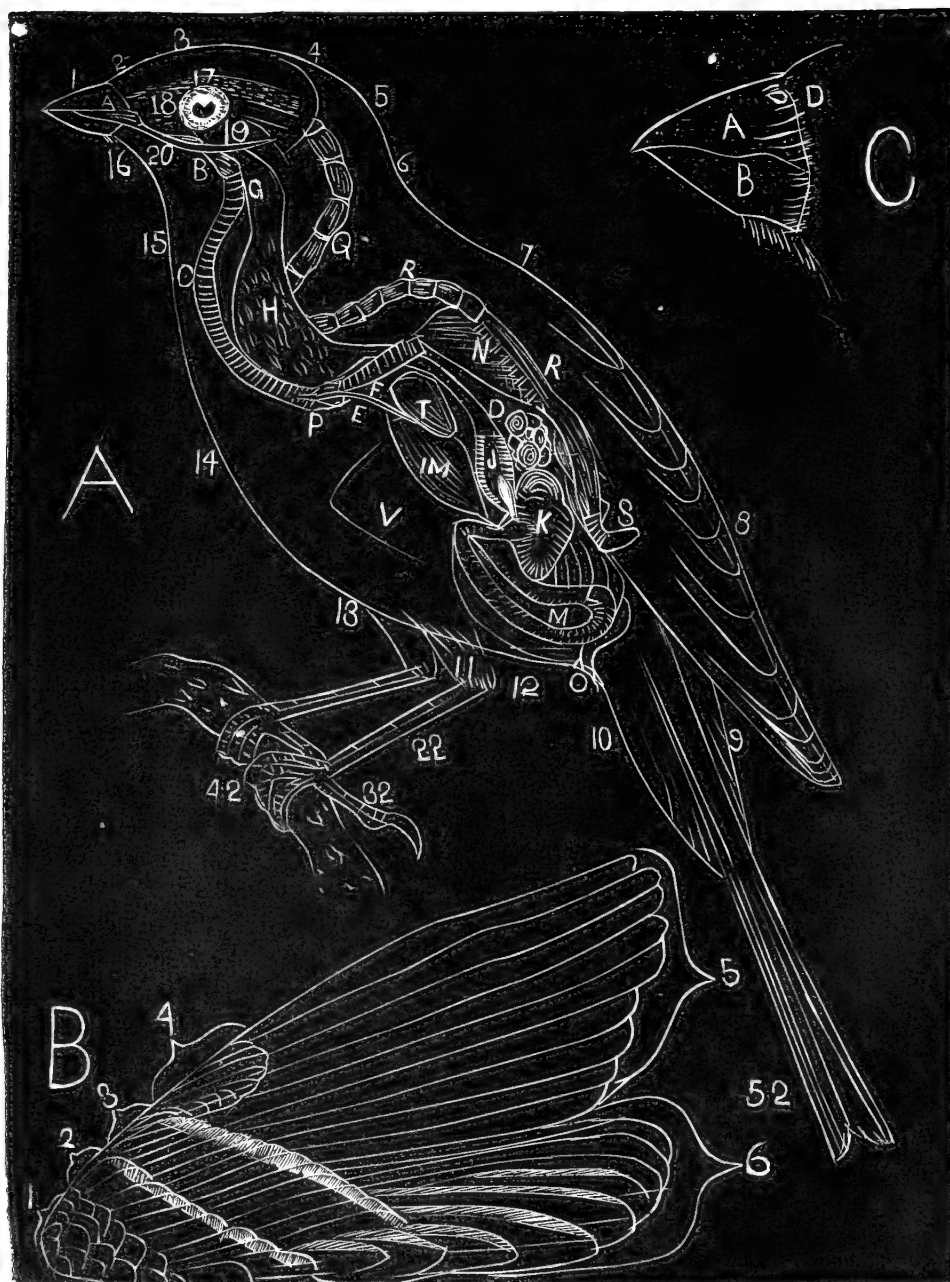
I will now add a few words of advice to beginners in bird study such as I have been accustomed to give to pupils for many years. The first and most important thing to observe about a bird, aside from its size, is its form, including the comparative size of all the parts. If the bird is singing or uttering any other sounds, try and fix all these sounds in the mind. Then note its color, including the distribution of spots and position of all markings. Note all habits and where the bird is, whether in a tree, bush, thicket, or on the ground. If it starts, observe its flight. All observations should be recorded as soon as completed, and checked, if possible, by a second observation. In identifying a species always keep in mind the season of the year in which it should normally occur where seen, and the range of the species.

While it is a fact that wonders are constantly occurring in the bird world (and herein lies much of the charm of bird study), and there is no good reason why some of the discoveries which are constantly being made, of species far from their usual habitat, or out of season, should not fall to the lot of even beginners, it will be well for all of us to exercise caution in our observations upon such matters. In identifying a supposed rare bird in the field, it will be well to keep in mind the fact that two pairs of eyes are better than one, and that it is best that one of these pairs should belong to someone who has had a rather wide experience in the study of birds.

I now offer this manual, so long promised, to my many pupils, and all others interested in ornithology, trusting that they will find herein some ideas which will prove useful to them in their studies of the many beautiful and interesting birds with which we are surrounded.

WEST NEWTON, MASS., Nov. 1905.





EXPLANATION OF DIAGRAM OF CHIPPING SPARROW.

A, EXTERNAL PARTS:- 1, bill; 2, forehead; 3, crown; 4, occiput; 5, nape; 6, hind neck; 7, back; 8, wing; 9, upper tail coverts; 10, under tail coverts; 11, tibia; 12, abdomen; 13, belly; 14, breast; 15, throat; 16, chin; 17, superciliary region; 18, lores; 19, ear coverts; 20, maxillary region; 22, tarsus; 32, hind toe; 42, front toe; 52, tail.

INTERNAL PARTS:- A, tongue; B, larynx; P, syrinx; C, windpipe; E, sterno trachealis; F, bronchial tube; G G, gullet; H, crop; K, stomach; J, proventriculus; L, fold of duodenum; M, pancreas; O, vent; D, ovaries; Q, vertebrae of neck; R, vertebrae of back; S, tail bones; T, heart; N, lungs; V, keel; I M, liver.

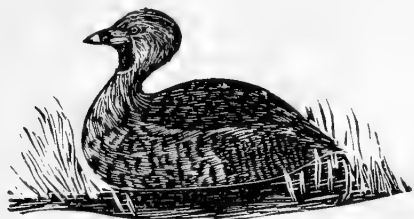
B, WING OF CHIPPING SPARROW:- 1, lesser coverts; 2, middle coverts; 3, greater coverts; 4, spurious wing; 5, primaries; 6, secondaries.

C, BILL OF CARDINAL GROSBEAK:- A, upper mandible; B, lower mandible; D, nostril.

A. GREBES. Podicipides.

Water birds with short bodies, medium long necks, and short wings which are concealed by the feathers of the sides and back when folded. Expert divers, but do not use the

Fig. 1



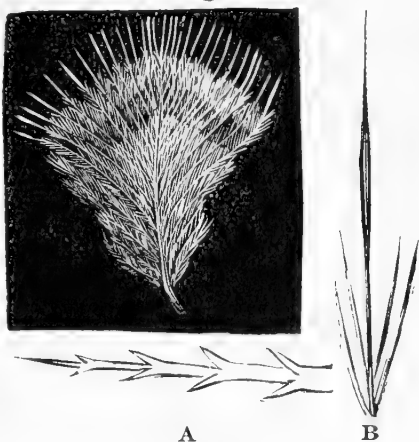
A, B, a, 1. 1-15.

wings under water. Possess the power of sinking slowly beneath the surface. Head, rather large and carried well back over the body as the bird swims, fig 1. Bill, more or less pointed, figs. 4, 5, 6. Space in front of eye, naked. Feathers, especially beneath, not close-

ly constructed, and fringed with hair-like terminations; these peculiar feathers retain the air in their interspaces when the bird dives, thus keeping the plumage dry; when it emerges the water which clings to the outer surface is thrown off by the agitation of the hair-like fringes, much as in the musk-

rat and other aquatic mammals, fig. 2. Tail, absent. Feet, with lobed toes; nails, flattened, fig. 3. Walk, or even run for a short distance, by making a special effort, but rise in flight from the water only. Flight, direct, neck and head, outstretched; feet, extended behind; wing-beats rapid. Nests, of matted vegetation, placed in reedy ponds, never on dry land, and are quite often floating; eggs, 6-8, greenish covered with a white

Fig. 2.

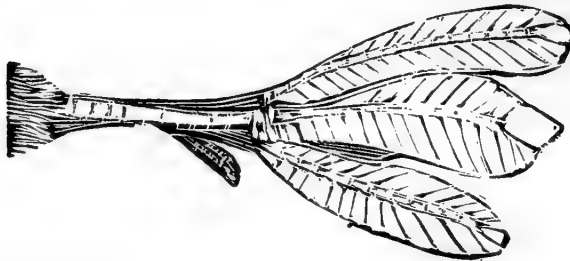


A, B, a, 1.

A, barbule; B, tip of feather, enlarged. incrustation. Young, downy, streaked and mottled with whitish and dark brown, slowly assuming the adult dress; active when hatched, swimming with their parents. Food, vegetable matter (often fresh water algae), insects, and small

fishes. Sexes, similar in color. To approach a grebe the observer should endeavor to see the bird before it perceives him. When the bird dives for food, walk toward it, standing perfectly still when it comes up; by continuing to do this, the margin of the water may be reached without alarming the bird. Grebes sink when they perceive anything of which they are suspicious, and dive when suddenly alarmed.

Fig. 3.



A, A, b, 1, 1-2.

A. SLENDER-BILLED GREBES. Podicipidae.

Bill, slender, longer than twice its depth, figs. 4, 5. Usually inhabit salt water in winter, but breed more often in fresh. Provided with special plumes about head and neck during the nesting season, which are reddish in color and more or less conspicuous. White patch on wing, noticeable in flight.

Fig. 4.



A, A, a, 1.

a. Long-billed Grebes. Colymbus.

Bill, three times as long as deep, fig. 4, Size, large, 18.00 20.00. Breeding plumes, short. Dull black above; silky white beneath.

1. **HOLBOELL'S GREBE**, *C. HOLBOELLII*. Largest of our grebes; bill, yellowish. In summer, neck reddish with short plumes. Breeds in the Arctic regions: found along the coast in autumn and winter, sometimes on fresh waters. Oct. 15 to May 15. Rather common.

b. Short-billed Grebes. Dytes.

Bill, less than twice as long as deep, fig. 5. Size, small, 12.00-14.00. Also differs from **a** in having the breeding plumes long and conspicuous.

1. **HORNED GREBE**, *D. AURITUS*. Smaller than **a**, 1, but similar in color in winter. In summer, line through eye,

Fig. 5



broadening behind into long plumes; lower neck, and chest, reddish; other elongated head plumes, greenish black. Breeds chiefly north of the U. S.; migrates south in Oct. and Nov.; winters from southern N. E. to Fla.; comes north in April; com-

A, **A**, **b**, 1
mon.

B. THICK-BILLED GREBES. Podilymbidae.

Bill, thick, shorter than twice its depth, fig. 6; no white patch on wing; no special head plumes. Occur mostly on fresh waters.

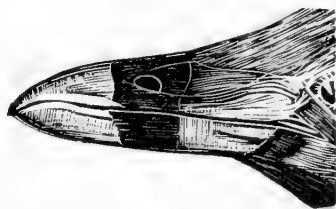
a. Black-throated Grebes. Podilymbus.

Throat, with a conspicuous black patch in the summer. Male larger than the female and probably polygamous.

1. **PIED-BILLED GREBE**, *P. PODICEPS*. Male, 15.00; female, 12.00. In summer, bill, bluish white with a black band crossing middle, fig. 6; dark-

brown above, lighter on sides of head and neck, and lower neck in front; silvery white beneath with obscure spots of dusky. In winter, throat, white; bill, brown without band, and there are no spots on the white beneath; neck, decidedly red-

Fig. 6



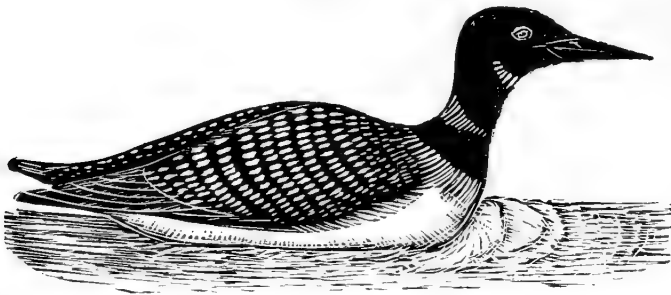
A, **B**, **a**, 1.

dish and this extends along the breast. Breeds in April and May from the British Provinces southward into S. A., nesting in small ponds in the more unsettled districts; migrates southward in Sep. and Oct. to winter from the Carolinas southward; comes north in April. Very common. Note, heard from March to June, given by both sexes, a hollow, quavering cry, uttered rapidly and with considerable volume.

B. LOONS. *Urinatorides*.

Water birds with long, flattened bodies, rather long necks, and long wings which are not wholly concealed by the feathers of the sides when folded. Expert divers which use their wings to aid in swimming under water. Sit low in

Fig. 7.



B, A a, 1. 1-10.

the water and carry the medium sized head well forward of the body when swimming, fig. 7. Tail, short. Feet, large; front toes, long and fully webbed; hind toe, short. Cannot walk on land or stand upright without making a special effort, thus cannot rise from the land. Flight, direct and rapid with neck and feet outstretched; wing-beats, rapid. Nests placed on dry land near water. Eggs, two, dark brown, mottled with darker. Young, downy and active when hatched, swimming with parents. Food, fishes. Occur in fresh and salt water. Usual note, a quavering cry like a weird laugh. Sexes, similar.

A. LOONS. *Gaviidae*.

Characters as above.

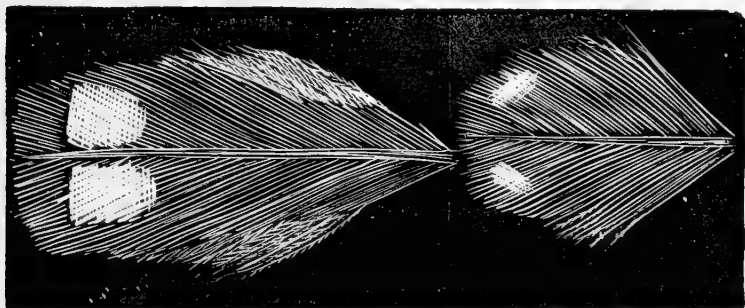
a, Loons. *Gavia*.

Characters as on the preceding page, under order.

1. LOON, *G. IMBER*. Largest of our Loons, 32.00. In summer, black above and on head and neck; marked on back with transverse bands of square spots, two to each feather, figs. 7, 8; white beneath; a collar, composed of elevated lines

Fig. 8.

Fig. 9.



B, A, a, 1.

B, A, a, 3.

of white, on lower neck, and transverse spot of same on middle neck beneath. In winter and young, duller above without white markings; throat and neck in front, white. Breeds on the borders of large inland ponds and lakes from northern U. S. northward. Very common. In winter occurs on salt water, off the coast, on bays, sounds, etc., from Me. to the Carolinas; rare in Fla.

2. BLACK-THROATED LOON, *G. ARCTICUS*. Smaller than 1, 29.00; differs in color in having the back of head and hind neck deep gray; the throat is black, and there are no white streakings on neck. In winter differs from 1 only in having each feather of back broadly margined with grayish. Breeds in the Arctic regions; south in winter to extreme northern U. S., where it is very rare.

3. RED-THROATED LOON, *G. LUMME*. Smallest of our Loons, 26.00; differs from 1 in having the head and neck ashy at all seasons; in summer there is a triangular patch of red on throat; at all seasons each feather of back has two oblique, rounded, sub-terminal spots of white, fig. 9. Breeds

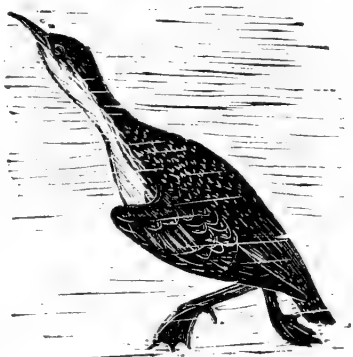
from the Gulf of St. Lawrence northward, chiefly along the coast. Winters from Mass. southward, occurring off the coast, in bays, etc. Comes south in Sep. and Oct.; most common in N. E. in Nov.; goes north in April. Very common; less shy than 1. Fig. 10; flying under water.

C. AUKS, MURRES, PUFFINS, ETC, Cepphides.

Water birds with rather short bodies; tails, short; front toes webbed; hind toe, absent, fig.

11. All swim and dive well like Loons. Sit upright on land, and walk well. All occur on salt water. Food, fishes. Flight, swift and direct, often with a swaying motion, but all turn readily in air; wing-beats, very rapid. The outer covering of portions of bill is moulted in some species. The young are covered with down when hatched, but are comparatively helpless, being

Fig. 10.



fed by regurgitation. All of the species occur on the open ocean in winter, but often not far from land, and thus can be sometimes seen from rocky promontories or open sea beaches. Sexes, similar.

B, A, a, 3. 1-15.

A. AUKS, MURRES, GUILLEMOTS. Alcidae.

Rather large-bodied, short-necked birds which ride lightly on the water, and sit upright on land, resting on the whole

Fig. 11.

foot.



a. Auks. Alca.

Heavy-bodied, rather thick-necked birds with the bill deep but very much compressed, and crossed by two grooves and a white band, fig. 12, on the next page.

C, A, a, 1. 1-2

1. RAZOR-BILLED AUK, *A. TORDA*. 15.00 long: black above; white beneath; narrow white wing band; brownish on head, neck, and throat, fig. 12. In winter the throat is white. Young have a smaller bill without grooves or bands. Nests in cavities about rocks; eggs, 1, 2, white, heavily mottled with brown and umber. Breeds the last week in June. A trim, neat, bird, rather unsocial, and quite quarrelsome. Occurs in summer from Grand Menan northward; migrates south late in Oct.; winters from Mass. to N. J.; goes north in early March. This species holds its tail upright when swimming. Cries, loud and harsh.

Fig. 12.

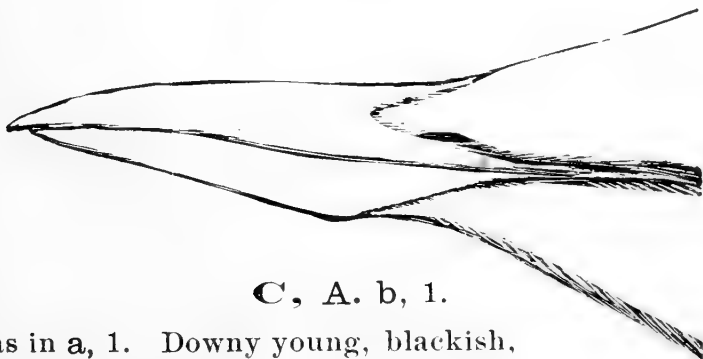


C, A, a. 1. 1-8.

b. Murres. *Uria*.

Differ from *a* in being more slender, with a pointed bill which is not much compressed nor at all ridged, figs. 13, 14. Colors, brownish or black above; white beneath; wing band,

Fig. 13.



C, A. b, 1.

much as in *a*, 1. Downy young, blackish, sprinkled with yellowish. Eggs, 1, pyriform, greenish or white, spotted, dotted, and lined with black, placed on shelves of rocky cliffs. The birds when on land sit on

the whole foot; on water, hold head upright, and, when seen at a distance, somewhat resemble floating bottles, but differ from a, 1 in not holding the tail upright. Social, gentle, and friendly. All migrate southward in Nov. and northward in Feb. and early March. Note, when annoyed, a murmuring sound, like "*murre*", often repeated.

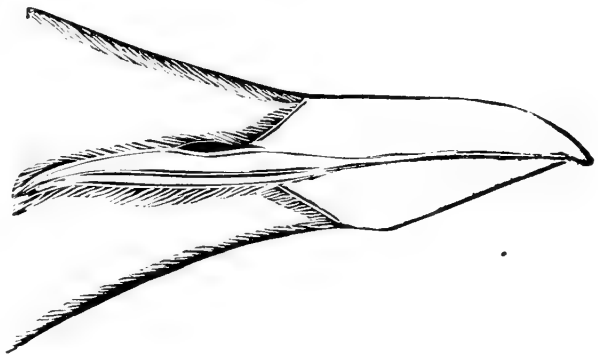
1. MURRE, U. TROILE. 18.00 long; brownish-black above and on neck and throat. White to chin in winter. Bill, wholly black. Breeds from the Magdalen Islands northward in late June. Winters as far south as northern N. E. Common.

2. RINGED MURRE, U. RINGVIA. Differs from 1 in having a white ring around eye and a line running from it on side of head, plate 1. Range, similar to that of 1. Rather rare.

3. BRUNNICH'S MURRE, U. LOMVIA. Differs from 1 in being nearly black

Fig. 14

above, with a shorter, thicker bill, that has the basal portion of the cutting edge of upper mandible thickened and yellowish in color, fig. 14. It ranges with 1 in summer; in winter south as far as N. J. Abundant.



C, A, b, 3.

c. Guillemots. *Cepphus*.

Similar in general form and habits to b, but smaller; in summer black throughout; often with a large, white wing patch, very conspicuous in flight; feet, bright red; winter plumage, mottled with white and black. Egg, 2, 4, oval, greenish to whitish, mottled with black and brown.

1. BLACK GUILLEMOT, C. GRYLLE. 13.00 long; white patch on wing often entirely or partly divided by a black wedge, fig. 15 (dark dress, summer; mottled, winter). Coast



HEAD OF RINGED MURRE.

of Me. northward; comes south in early Oct.; winters to N. J. Goes north in April; breeds in June. Note, when disturbed, a mournful whistle; at other times gives a chuckling cry. Very common.

Fig. 15.



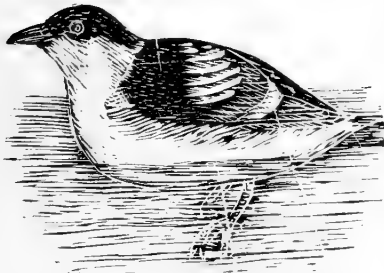
2. MANDT'S GUILLEMOT, C. MANDTII. Differs from 1 in having the white wing patch larger and never divided by a black wedge. Breeds from the coast of Labrador northward in June and July; southward range in winter not well known.

d. Little Auks. Alle. C, A, c, 1. 1-10.

Very small, 8.00; bill shorter than head, not compressed (fig. 16).

1. DOVEKIE, A. ALLE. Black on upper parts and on the head and neck all around; wing bands, streaks on secondaries and beneath, white; in winter, white to the chin

Fig. 16.



with a whitish collar extending around neck. A plump bird, looking very small on the water, upon which it rides very lightly. Breeds in the far north, migrating south in winter to N. J., appearing in early Nov.; goes north in April. Common, occurring singly or in flocks, sometimes blown inland in severe storms

C, A, d, 1. 1-6. which occur during the southward migration. The single, pyriform, greenish-white, unspotted egg is placed on the shelves of rocky cliffs.

e. Puffins. Fratercula.

Thick-bodied, short-necked birds with a deep, much compressed bill which gives them a parrot-like appearance. Eyelid, with horny appendages, fig. 17.

1. PUFFIN, *F. ARCTICA*. 13.00 long; a broad collar around neck; upper parts and sides, brownish-black; sides of head and chin, ashy; white beneath; bill, bluish with the ridges orange; feet, coral red. Young, similar, but the bill is smaller, without ridges, and dusky; cheeks, dusky. The single egg is placed in a burrow excavated by the bird, white, occasionally mottled with greenish. Very social, friendly birds when breeding. When annoyed utter a croaking cry. Breed in July from the Bay of Fundy northward; comes south in Oct. to N. J.; goes north in April. In winter keeps well out to sea, rarely approaching land, excepting islands or points that project into the ocean.

Fig. 17.



1*. LARGE-BILLED PUFFIN, *F. C, A, e, 1.* 1-6. *A. GLACIALIS*. Similar to 1, but a little larger with the bill proportionately larger. Coasts and islands of the Arctic Ocean, northern and western Greenland; probably ranging southward in winter.

f. Crested Puffins. Lunda.

Both sides of head in breeding season with a large, pendent tuft of silky, straw-colored feathers; general form of bill as in *e*, but the under mandible is without grooves, and there are no horny appendages on eyelids.

1. TUFTED PUFFIN, *L. CIRRHATA*. Differs from *a*. 1 in being sooty gray beneath in all stages. Coasts and islands of the north Pacific; accidental in the Bay of Fundy and Kennebeck River, Me.

g. Murrelets. Synthliboramphus.

Bill, short, somewhat compressed; rather small, short-necked, compact birds, auk-like in general habit; lead-colored above; white beneath.

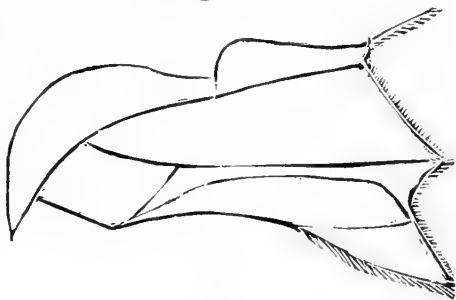
1. ANCIENT MURRELET, *S. ANTIQUUS*. 10.00 long; top and sides of head, throat, and fore neck, black; sides of neck and a broad stripe on either side of back of head, white; upper back, streaked with white; in winter the throat is white and the white streakings above are absent. Coasts and islands of the north Pacific; accidental in Wisconsin.

D. TUBE-NOSED SWIMMERS.
Tubinares.

Ocean-inhabiting birds of varying sizes, but always with long, narrow wings, webbed anterior toes, and nostrils more or less protected by external tubes which open forward, figs. 18, 20, 22, 24.

Fig. 18.

All of the species move with ease upon the wing, and among them are found some of the strongest flying birds known; all swim well, but none of our species dive; when annoyed,



D, B, a, 1

nearly all eject an oily fluid from the mouth which has a strong odor. The outer covering of bill consists of several pieces, fig. 18. Egg, single, white; young, covered with down when hatched, but helpless and fed by regurgitation.

A. ALBATROSSES. Diomedidae.

Very large birds living upon the open ocean remote from continental land. Wings, very long and narrow, having 30 to 50 flight feathers; nasal tubes, widely separated. Nests, placed upon oceanic islands, mound-like structures, placed in open situations; single egg, white, sometimes sprinkled with reddish dots. All of the species occur in the Pacific or oceans of the southern hemisphere; accidental elsewhere.

a. **Yellow-billed Albatrosses; *Thalassidroma*.**

Upper division of bill-covering, narrow with a strip of naked skin extending from nasal tubes to base. Dark slaty above; white beneath.

1. **YELLOW-NOSED ALBATROSS. *T. CULMINATUS*.** 36.00 long; rump and upper tail coverts, white; tail, grayish; head, varying from white tinged with slaty to grayish; dark space before and behind eye and a white spot on lower eyelid. Indian and South Pacific Oceans; accidental in the Gulf of St. Lawrence.

B. PETRELS. *Procellariidae*.

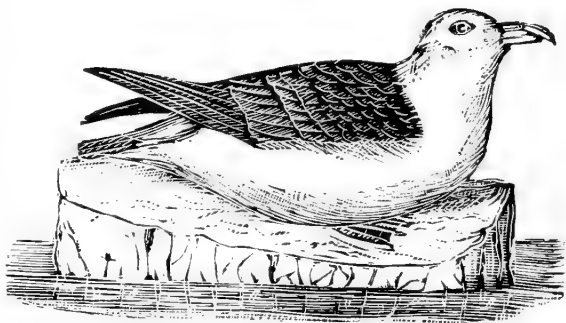
Ocean birds of varying sizes. Wings, shorter than in **A**, the flight feathers being 30 or less; nasal tubes, connected, figs. 19, 22, 24. Nests, placed in cavities of rocks or in burrows. Species of this group occur on all oceans. Food, fishes, squid, and cuttlefish; are also fond of fatty matter cast overboard from vessels and will follow them to obtain it.

a. **Fulmars. *Fulmarus*.**

Birds of the open ocean; excepting to breed, seldom approaching land; of rather large size and gull-like appearance, white with a

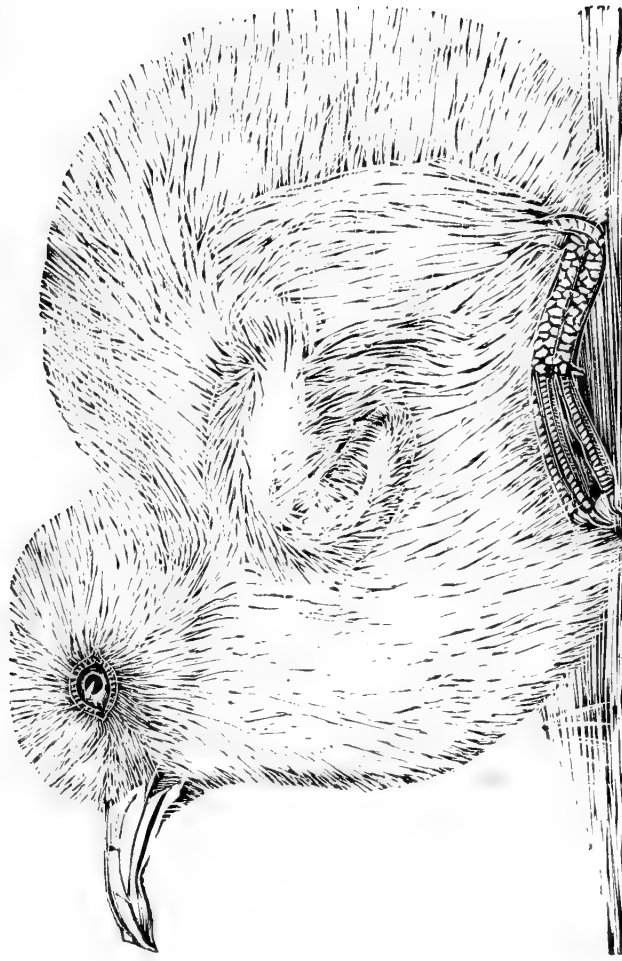
Fig. 19.

bluish mantle; bill, short and stout, as deep as one half its length, fig. 18; wing, folding about to tip of tail. Our species have a light (fig. 19) and dark phase of plumage. Common on the ocean.



D, B, a, 1. 1-10

1. **FULMAR, *F. GLACIALIS*.** 18.00 long. Light phase:- head, neck, and lower parts, white; upper parts, bluish-gray. Dark phase:- smoky-brown throughout. North Atlantic, breeding on St. Kilda and other Scottish islands that lie far out to sea: south on the American side, in winter, as far as the Georges Banks.



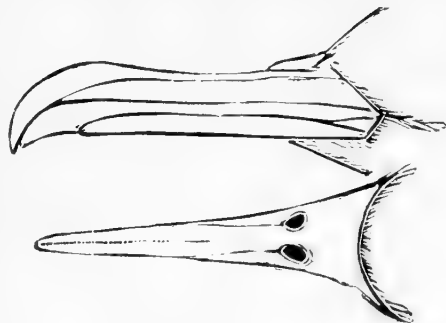
YOUNG AUDUBON'S SHEARWATER.

1*. LESSER FULMAR, F. G. MINOR. Similar in color to 1, but smaller, 16.00 long. Range about the same.

b. Shearwaters. Puffinus.

Birds of the ocean, but often approaching within a few miles of the coast; of varying size, but none are very small; bill, rather slender with nasal tubes not 1-3 its length, fig. 20; folded wings, reaching tip of tail, or longer; ashy-brown above, white beneath; or else sooty-brown throughout; anterior toes, long; posterior toe, short.

Fig. 20.



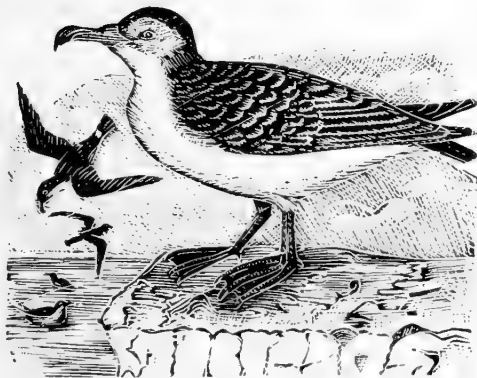
Graceful, easy-flying species

D, B, b, 3.

which seldom rise high over the water, and often fly in small flocks close to the surface, often side by side; during boisterous weather they (and other Petrels) fly along the hollows of the ever moving waves, and as the seas pass under them, cross their crests diagonally. Thus by shearing the water, the birds allow the spray, which is driven from the wave tops with violence by the fierce ocean winds, to strike on one side of their tubular nostrils. Nest on islands, placing the egg in rock cavities, or beneath loose slabs of stone.

1. GREATER SHEARWATER, P. GAVIS. 20.00 long;

Fig. 21.



D, B, b, 1. 1-10.

smoky-brown above, darkest on head, wings and tail; longest upper tail coverts, white; lower parts, white, more or less clouded with dusky on sides and behind; the line of demarkation between white of throat and dark of head is sharply defined, fig. 21, bill, nearly black. Atlantic Ocean; breeds in the southern hem-

isphere: found off our coast from May until Dec. Very common.

2. CORY'S SHEARWATER, *P. BOREALIS*. Similar to 1, lighter above: bill, yellowish and somewhat larger; the ashy markings on the sides of the head extend down lower on the throat, and grade into the white without any sharp line of demarkation. Coast of Mass., R. I., and L. I. from Aug. to Nov.; breeding and other range unknown. Common some years.

3. AUDUBON'S SHEARWATER. *P. AUDUBONI*. 12.00 long; dark sooty-brown above; white beneath; under tail coverts, dusky; patch in front of folded wing, ashy; space beneath eye, slightly dusky, otherwise line of demarkation between the dark top of head and white of its sides is sharply defined; bill, blue-black. Downy young, dusky-brown above; lighter beneath, plate 2. Flight, swift and direct in the daytime, more erratic at night about the breeding places. Cries, when disturbed, harsh and discordant: breeding notes, given at night, mellow and rather musical, uttered in a minor key when the bird is flying, "*que-re-a-var*", accented on the second and fourth syllables, but mainly on the second with the last prolonged. Nests, placed in cavities of rocks, beneath loose slabs, in caves, and sometimes in the shelter of creeping vines; eggs, deposited from March 15 to April 15. Warmer parts of the Atlantic: casual as far north as N. J. and L. I.; breeds on the Bahamas and Bermudas; common; rare in the vicinity of the Bahamas in winter.

4. MANX SHEARWATER, *P. PUFFINUS*. Similar to 3, larger, 14.00, and with the black of head extending somewhat below eye. North Atlantic, chiefly on the eastern side, casual off our coast.

5. SOOTY SHEARWATER. *P. FULIGINOSA*. 16.00 long; similar in form and habits to 1; sooty-brown throughout, darkest on wings and tail, palest beneath. Atlantic Ocean; breeds in the southern hemisphere; occurs off our coast from S. C. northward from July 1 until Sep.

c. Diabolic Petrels. *Aestrelata*.

Oceanic Petrels, mainly inhabiting the warmer waters of the world, those occurring with us being only stragglers. Size, moderate, 15.00 or less; bill, short, nasal tubes about one-third its length; wings, long, folding beyond tail; tail, wedge-shaped; colors, black, often with conspicuous white markings. Nests, placed in cavities of rocks, sometimes on mountain tops of islands.

1. BLACK-CAPPED PETREL. *A. HASITATA*, 16.00; top of head and upper parts, black, scapularies, and margins of feathers, and back, paler; rump, basal half of tail, sides of tail, sides of head and neck, and lower parts, pure white. Occurs in the warmer parts of the Atlantic; stragglers have been taken in Fla., Vir., N. Y., Vt., and Ont.

2. SCALED PETREL, *A. SCALARIS*. Size of 1; dark bluish-ash above, feathers of back, scapularies, and greater wing coverts, broadly bordered with ashy-white; beneath, white, irregularly and rather finely banded on sides and below with grayish. Known only from a single specimen which was obtained in a plowed field in Livingston Co., N. Y. in April, 1880.

d. Wedge-tailed Petrels. *Bulweria*.

Bill and general form much as in c, but the tail is more decidedly graduated or wedge-shaped.

1. BULWER'S PETREL, *B. BULWERI*. 10.00; sooty-brown throughout, paler beneath and on greater wing-coverts. Occurs off the coast of Europe and Africa; occasional in Greenland and accidental in Bermuda.

e. Storm Petrels. *Procellaria*.

Smallest of our Petrels, about 5.50 long; bill, short, nasal tubes, about half its length; tail, nearly square; tarsus, short, about the length of the toes; bill and feet, wholly black.

1. STORMY PETREL, *P. PELAGICA*. Sooty-black throughout, lighter below; upper tail coverts and patch of

varying size on under side of wing, white. North Atlantic, south to the Newfoundland Banks and west coast of Africa. Rare in summer.

f. Forked-tailed Sooty Petrels. *Oceanodroma*.

Small Petrels; bill, about two-thirds as long as head, nasal tubes, about half its length, fig 22; tips of toes of outstretched feet not reaching tip of tail, fig. 23; tarsus, shorter than toes; wings, folding beyond the deeply forked tail; the bill and feet are wholly black.

Fig. 22.



D, B, f, 1.

1. LEACH'S PETREL, *O. LEUCORHOA*. 8,00; sooty-black, lighter beneath, and with a decidedly palish brown space on middle of wing; spot on rump, white. North Atlantic and north Pacific Oceans; breeds on our coast from Me. northward in June, nesting usually in burrows, dug by the birds in the surface of peaty soil on islands, but occasionally on the face of earthy or sandy cliffs, like Bank Swallows. Common from June until Oct.

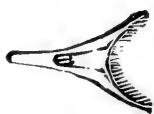
Fig. 23.



g. Long-legged Petrels. *Oceanites*.

Small; bill, weak, not half as long as head, fig. 24; tips of outstretched toes reaching beyond tail, fig. 25; tarsus, much longer than toes; wings, long, folding beyond the nearly square tail.

Fig. 24.



D, B, g, 1.

1. WILSON'S PETREL, *O. OCEANICUS*. 7.00; sooty-black throughout, a little lighter beneath; wings and tail, wholly black; webs of toes, mostly yellow. North and South At-

lantic and southern oceans; breeds on Kergulen Island in February. Abundant off the eastern coast of the U. S. from June until Sep.

Fig. 25


D, B, g, 1. 1-5

[NOTE: on page 21, under **D**, I stated that none of the order dive. Since this was printed I find, upon good authority, that the Fulmar occasionally dives a little way under water for its food. The Shearwaters may also sometimes do this in order to catch the squid upon which some of them feed, but I have never seen one dive.]

E, TOTIPALMATE SWIMMERS.

Steganopodes.

Water birds of varying sizes, but many of them are large.

Fig. 26.



Hind toe, connected with the anterior toes by a web, fig. 33; there is an extensible pouch beneath the bill (gula sac), fig. 31; external nostrils, very small, fig. 27, or wholly absent, fig. 31. A well defined, easily recognized group of birds, having well established and clearly separated families, genera and species; comparatively few in number, but, excepting the polar regions, generally distributed throughout the world. Young, naked when hatched, fig. 26, but soon covered

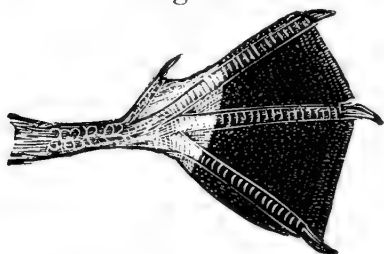
E, B, a, 1. 1-3. with down; helpless and fed by regurgitation. Middle toe nail pectinated in some genera, fig. 33, 35.

A. TROPIC BIRDS. Phaethontidae.

Ocean birds of moderate size, mainly white, but with some dark markings above; bill, pointed; gula sac, mostly feathered, fig. 27; tail, short, graduated, but with the central feathers narrowed and greatly elongated, fig. 29; toes,

fully webbed, fig. 28; external nostrils, present. Single egg, placed in a cavity on rocky cliffs of oceanic islands; purplish-brown, sprinkled and spotted with darker brown. Flight, direct, steady; wing-beats, rapid, but the birds can turn in air and circle with ease. Procure their prey by diving like Terns. Cries, loud and harsh. Gregarious when breeding, solitary at other times, Tropical and subtropical. Sexes, similar.

Fig. 28.



E, A, a. 1. 1-2

tail feathers; curved mark on side of head, patch on wing, near back, and one near terminal portion of primaries, purplish-black. Young, without the greatly elongated central tail feathers, and are more or less banded above with black. Breeds in the West Indies, Bahamas, and Bermudas in May; occasional in Florida; accidental in western N. Y.

2. RED-BILLED TROPIC BIRD, P. AETHEREUS. Differs from 1 in being a little larger, 30.00 to 35.00; the bill is coral-red; the elongated tail feathers, white. Coasts of tropical America; breeds on islands

Fig. 27.



E, A, a, 1. 1-4.

a. Long-tailed Tropic Birds. Phaethon.

Characters as in A

1. YELLOW-BILLED TROPIC BIRD, P. AMERICANUS. 28.00 to 30.00; bill yellow or orange; plumage, especially beneath, well tinged with salmon-pink which becomes deeper on the elongated

Fig. 29.



E, A, 1. 1-6.

in the Gulf of California; accidental on the Banks of Newfoundland.

B. Gannets. Sulidae.

Ocean birds of from moderate to large size; white with black or brown primaries; bill, pointed; space about face, naked; gular sac rather small, not wholly feathered; tail, graduated, with central feathers not very much elongated; toes, fully webbed; external nostrils, absent, fig. 30. Nests, placed on the ground, on rocks, and on trees; they are bulky structures, composed of sticks, sea-weed, and other coarse materials. Eggs, one or two, white, covered with a chalky incrustation. Flight, steady, direct; wing-beats, rather rapid; turn in air and circle with ease; procure their prey by diving directly downward from a considerable height, becoming completely submerged; the feet are usually wholly concealed in flight; walk well and perch on trees with ease. Cries, harsh and loud. Downy young, white. Sexes, similar. Tropical, subtropical and temperate.

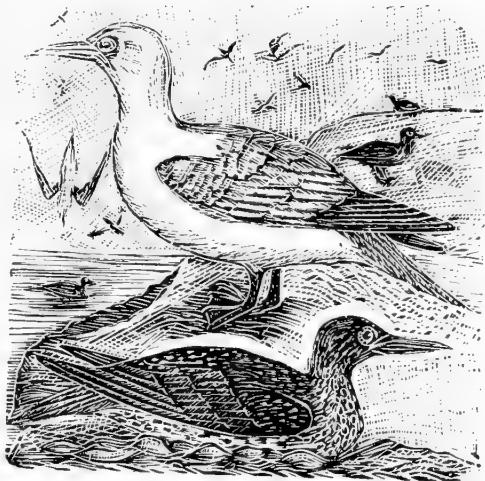


Fig. 30.

E, B, a, 1. 1-10.

a. GANNETS. Sula.

Characters as above.

1. GANNET, *S. BASSANA*. 39.00; white, becoming buff on neck and head; primaries, brownish-black; bill, bluish-white; iris, blue; naked space about face, and gula sac, dark-bluish: feet, bluish with lines of green along tarsi and toes. Young, dark-brown, streaked and spotted with white, fig. 30, upper bird, adult; lower, young. Breeds on islands in the Gulf of St. Lawrence in May; migrates north in March and April, south from Sep., to Nov.; winters from N. E. to Fla.

2. BLUE-FACED GANNET, *S. CYANOPS*. 28.00; white; primaries and their coverts, tail (excepting central feathers and base which are white), dark-brown; naked skin of face, bluish. Young, head, neck and upper parts, dark-brown; rump, streaked with white; lower parts, white, with dusky streaks on flanks. Breeds from the Bahamas southward in May; wandering to Florida.

[CORY'S GANNET, *S. coryi*, which breeds on the northern Cayman Islands, may be expected to occur as an occasional visitor to the coast of the Gulf States. Differs from 2 in having the tail wholly white. See Maynard's Contributions to Science, vol. i, p. 40.]

3. RED-FACED GANNET, *S. PISCATOR*. 28.00; white; primaries, hoary-slate; naked space of face, yellowish or red. Young, brown throughout, lighter beneath. Breeds on islands in intertropical seas, wandering north to Florida.

4. BOOBY, *S. SULA*. 30.50; head, neck, breast, and upper parts, sooty-brown tinged with grayish on head and neck; lower parts behind breast, white. Young, brown throughout. Tropical and subtropical coasts of America; common off the east coast of Florida; rare as far north as Ga.; accidental in Mass.

C. PELICANS. *Pelecanidae*.

Water birds of large size; white or brownish; bill, long, flattened and prominently hooked; gular sac, very large, not feathered; tail, short, rounded; toes and nostrils as in **B**,

Fig. 31.



fig 31. Nests placed

E, C, a, 1. 1-7.

in trees or on the ground; eggs, 1 or 2, much as in **B**. Young in down, grayish. Flight, slow, direct, the birds, often forming lines side by side or V-shaped flocks, move by alternate flapping and sailing; wing-beats, slow. Incapable of producing any sound, save a low grunt. Highly gregarious at

all times. Walk well and perch on trees with ease; when sitting, the head is usually held back with the bill down and resting on the breast, fig. 32. Sexes, similar.

a. Pelicans. Pelecanus.

Characters as above.

1. WHITE PELICAN, *P. ERYTHORHYNCHOS*. One of our largest birds, 68.00; primaries and most of the secondaries, black; center of scapularies, and tail feathers, salmon; spot on breast and wing coverts, pale straw; iris, white in summer, brown in winter; bill, naked space about face and gula sac, yellow; there is a central elevation on the bill in summer, fig. 31, which is moulted in autumn. Winter adults and young are without the salmon and straw markings. Feed by swimming and scooping the small fishes, upon which it usually subsists, into its gula sac by a side movement of the head that is often entirely submerged; the sac is then contracted and the water forced out on either side of the bill; the fish are then swallowed at once. After feeding, all rise to a considerable height and circle about for an hour or more. Rest on isolated sandbars at night and often resort to them by day. Breed in the interior of N. A. from Utah northward; common in West Florida and along the Gulf coast in winter; go north in early April to breed in May; return south in Sep.; now rather rare on the Atlantic coast, but straying as far north as Mass.

Fig. 32.



2. BROWN PELICAN, *P. FUSCUS*. 50.00; above, grayish with feathers more or less margined with dark-brown; head and stripe on neck adjoining gula sac, white, the former tinged with yellow; remainder of neck, dark chestnut-brown; beneath, sooty-black, streaked with whitish; patch on breast, pale straw; iris, white; bill, whitish edged on lower mandible and tipped on upper with red; na-

ked space about face and gula sac, greenish; feet, bluish. In winter the entire head and neck are white. Young, gray above and white beneath. Brown Pelicans fish more often by flying at a slight elevation over the water, then dropping into it, than by swimming. Fish are carried to the young in the gullet, not in the gula sac, and regurgitated. Breed in abundance on the islands of southern Fla., Gulf of Mexico, Caribbean Sea, and West Indies, wandering north regularly to N. C. and accidentally to Ill.

D. CORMORANTS. *Phalacrocoracidae*.

Water birds of from moderate to large size; black or brownish; bill, shorter than head, not flattened, but prominently hooked; gula sac, small, fig. 34; tail, long, rounded, with feathers stiffened; toes and nostrils as in **B**, fig. 33; foot, 1-3; toe nail, life-size. Nests, placed on rocky cliffs, trees, and bushes, composed of sticks, seaweed, etc.; eggs, 2 to 5, much as in **B**. Flight,

Fig. 33.



E, D. a, 2.

Fig. 34.



rapid, direct, often in lines or Vs, but frequently breaking into irregular masses; wing-beats, continuous and rather rapid. Often perch on buoys, beacons, partly submerged rocks, and trees; when sitting upright, the neck is curved and the head is held well up slightly in advance of the body; sometimes the wings are widely spread and held in this way for a considerable time, fig. 34; walk fairly well; dive with ease, sometimes from the wing, but usually when swimming, remaining beneath the surface of the water for some time; in alighting, will

E, D, a, 2. 1 10. usually pass the object on which they intend to rest, then turn and come back to it; in starting from a perch, will almost always drop downward nearly to

the water, then rise; when suddenly alarmed by a loud shout or gun shot, if flying low over the water, will often drop into it, diving as soon as they strike it; the cry, seldom given, is a harsh croak. The young are naked when hatched with the skin bluish or black and shining as if polished. Sexes, similar.

a. **Cormorants. *Phalacrocorax*.**

Characters, as in family.

1. CORMORANT, *P. CARBO*. 38.00; feathers of throat, encroaching upon gula sac in a point which extends nearly to bill; tail feathers, 14; blue-black, grayish-brown on back and wing coverts where each feather is bordered with black; space adjoining gula sac, filamentous feathers scattered over head, especially above eye, and large patch on flanks, white; iris, green; naked space about head, greenish-brown; gula sac, orange; feet, black. Young, brown above, lighter or even whitish beneath; no white patches anywhere as in adults. Atlantic coast of N. A., breeding from the Gulf of St. Lawrence northward in May; goes south in Nov.; north in April; winters from Greenland to N. J.; not uncommon, especially north of the U. S.

2. DOUBLE-CRESTED CORMORANT, *D. DILOPHUS*. Tail feathers, 12; differs from 1 in being smaller (32.00); in having no white in any stage of plumage, save the elongated feathers over eye in adult breeding birds, and in not having the feathers of throat encroaching on gular sac in a point, fig. 34; naked space about bill, orange; bill, black banded with blue and white; feet, black. Young, light brown beneath but never whitish. Breeds from the Bay of Fundy, the Great Lakes, Minn., and Da. northward in May; goes south through the interior and along the coast in Sep. and Oct; winters from N. E. southward through the Gulf States; comes north in April; common; occasionally found on fresh water ponds.

3. FLORIDA CORMORANT, *P. FLORIDANUS*. Similar to 2 but smaller (30.00) and with a larger bill, there are sel-

dom any white feathers over eye. South Atlantic and Gulf States, breeding chiefly along the coast in April, wandering up the Mississippi Valley to southern Ill; common.

4. MEXICAN CORMORANT, *P. MEXICANUS*. 26.00; brownish-black; slaty on back where the border of each feather is black; line adjoining gula sac, white; naked space about the face, brownish; in breeding birds there are short, scattering, filamentous, white feathers on top of head. Young grayish-brown, lighter beneath, sometimes white on throat near gula sac and on lower tail coverts. Breeds in Mexico, Texas and Cuba, wandering along the Gulf and up the Mississippi Valley to southern Ill.; common.

Fig. 35.

E. ANHINGAS. *Anhinga*idae.

Rather large but slender birds that occur chiefly on inland waters; sexes, unlike; males, nearly black; females, more or less brown; bill, slender, small; space in front of eye, naked; gula sac, small; neck, long and slender with a peculiar arrangement of joints near the middle whereby it may be partly withdrawn within its skin which is very dilatable; tail, long, rounded and fan-like, central feathers, corrugated transversely; toes, fully webbed; external nostrils, absent, fig. 35. Nests of sticks and weeds placed on trees or bushes; eggs, 2 to 5, much as in D; young, covered with short, yellowish down. Flight, steady and direct; wing-beats, rapid, but the birds often soar at a considerable height much as do the White Pelicans.



E, E, a 1. 1-10.

a. Anhingas. Anhinga.

Characters as under A.

1. ANHINGA, A. ANHINGA. 35.00; male, greenish-black spotted on upper back and streaked on scapularies and wing coverts (forming a patch on greater) with gray; tail, tipped with reddish-ash; in breeding birds there are numerous, long, filamentous, ashy-white feathers scattered over the head and neck; gula sac and lower mandible, orange; upper mandible and space in front of eye, dark-brown, the latter black lined with green in breeding birds; iris, red; feet, brown. Young, with more or less whitish on head and neck and the tail feathers are not corrugated. Female differs from male in having head, neck and upper breast ashy-yellow, becoming brownish above. Young, browner with few or no white markings above. Common along rivers and on inland bodies of fresh water where it sits upright on trees that project over the water; when suddenly alarmed drops directly into the water and instantly disappears; has the power of sinking slowly under the surface, beneath which it can swim with ease, thus capturing the fishes upon which it feeds; sometimes plunges into the water when in full flight, but always obliquely, and can emerge in flight; often swims with the head and neck or even the head or bill projecting above the surface. The cry, seldom given, is guttural and harsh. Resident in tropical and subtropical America, north in summer to the Carolinas, the mouth of the Ohio and southern Kansas. Breeds in Florida in March.

Fig. 36.

F. FRIGATE BIRDS. Fregatidae.

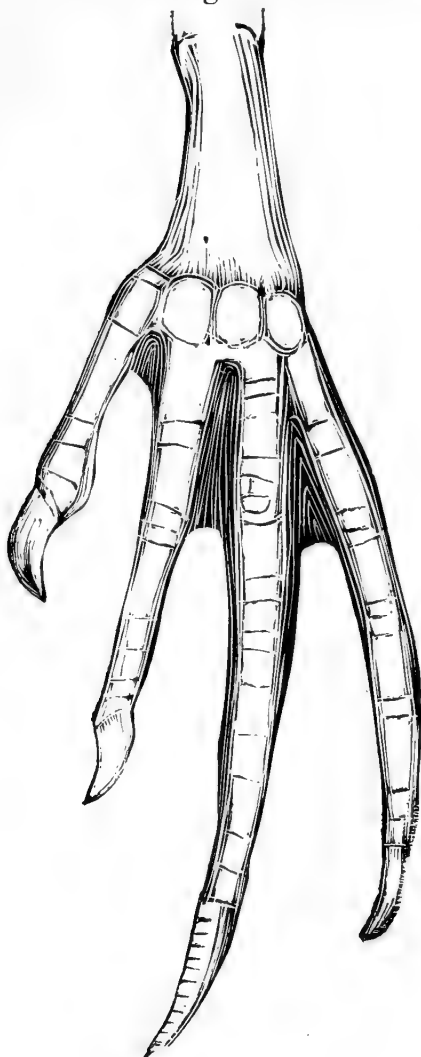
Ocean birds of large size and powerful flight; bill, longer than head, somewhat flattened and strongly hooked, fig. 36, head, large and somewhat crested; gula sac, rather large; space around eye, naked but this does not extend to bill; neck, short; wings, long; tail, deeply forked, outer feathers, considerably elongated; feet, very small, toes, about half



E, F, a, 1. 1-20.

webbed, fig. 37; external nostrils, absent. Nests and eggs, much as in *D*. Flight, steady, majestic, and exceedingly graceful; wing-beats, slow. Cries, harsh and loud. Procure their food mainly by robbing other sea birds of fishes which they have captured. Highly gregarious at all times. Young, naked at first, lead-colored, but soon covered with long, white down. Perch well on trees and rocks but do not walk well. Sexes, not similar. Tropical and subtropical.

Fig. 37.

**E, F, a, 1.**

graceful; wing-beats, slow. Cries, harsh and loud. Procure their food mainly by robbing other sea birds of fishes which they have captured. Highly gregarious at all times. Young, naked at first, lead-colored, but soon covered with long, white down. Perch well on trees and rocks but do not walk well. Sexes, not similar. Tropical and subtropical.

a. Frigates. *Fregata*.

Characters as in *F*.

1. MAN O' WAR BIRD, *F. AQUILA*. 40.00; male, black with the lanceolate scapularies and interscapularies iridescent with green and purple. Female, duller black, breast and sides whitish. Young, head, neck, and most of under parts, white; dull black elsewhere. Tropical and subtropical seas, chiefly north of the equator; breeds as far north as the Bahamas, Florida and Texas; accidental in Pa., Ohio, Kan., and Nova Scotia.

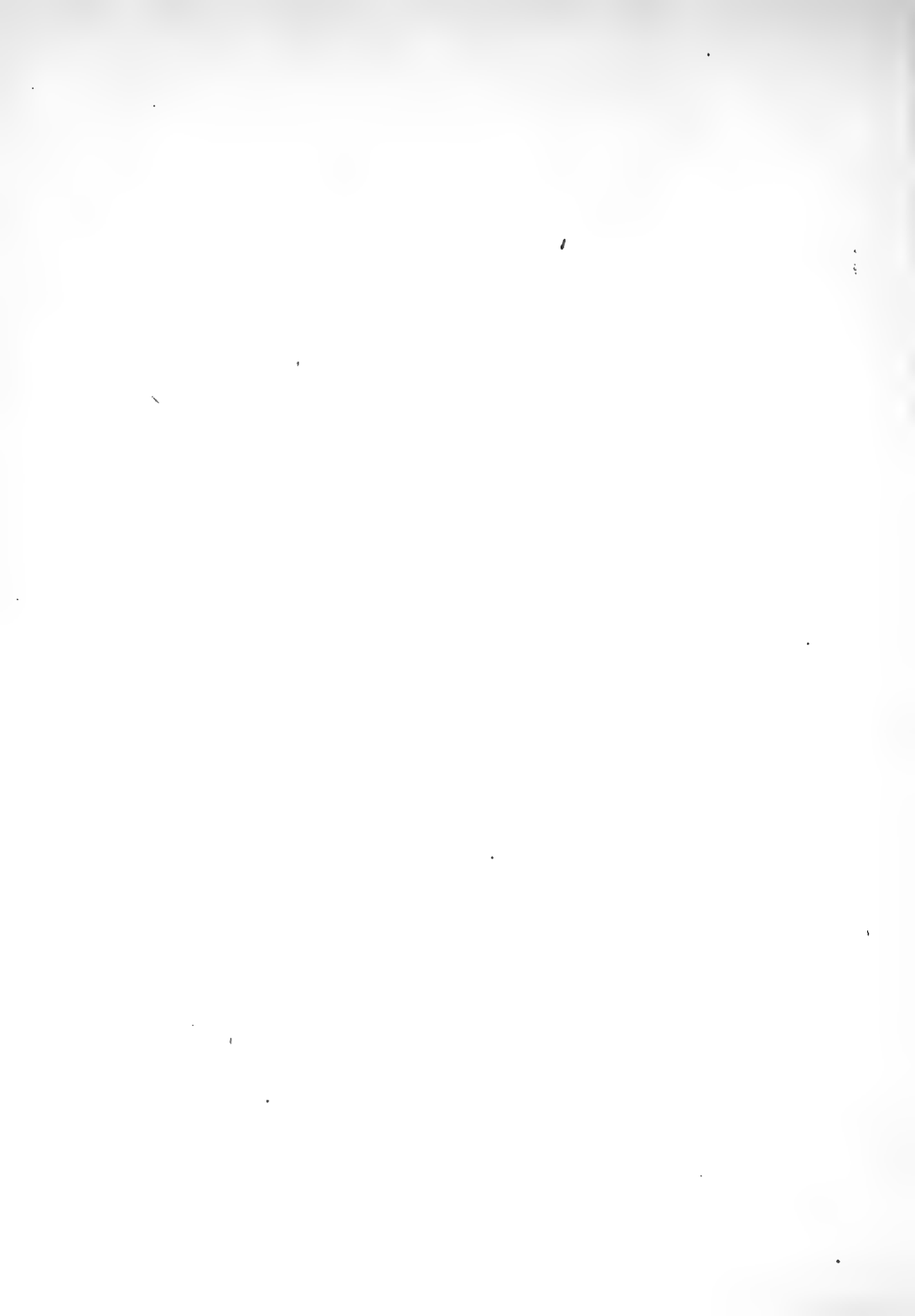


PLATE 3.



HEAD OF COMMON TERN.

F. LONG-WINGED SWIMMERS, Longipennes.

Water birds of varying sizes, with long wings and with anterior toes webbed to a greater or less extent, fig. 38; bill, variable, but the nostrils are always open, figs. 39, 50, plate 3; gula sac, absent; color, variable, but often bluish or slaty above and white beneath; some few species are black above, and some brown or even dusky throughout. Young, covered with down when hatched, plate 4, active, but are fed by their parents. Food, mainly fishes, a few are scavengers, and a few subsist partly upon insects. Inhabit all regions of the globe on sea coasts or in the neighborhood of large bodies of fresh water. Sexes, similar.

Fig. 38.

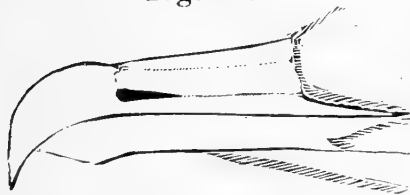


F, B, d. 3. 1-2

A. SKUAS AND JAEGERES. Stercorariidae.

Gull-like birds of large or medium size, dark above and

Fig. 39.



F, A, b, 2.

also sometimes below; often banded below; bill, strongly curved with covering of upper mandible composed of four pieces, one at tip, one on either side and one at base, fig. 39; wings, long; tail, short, square

with central feathers projecting beyond the others, figs. 41, 43, 44; toes, fully webbed. Ocean birds which breed on or near the coasts of the colder waters of the world; nests, placed on the ground; eggs, 2 or 3, oval, brown or greenish-brown, spotted and blotched with darker. Food, usually fishes often procured by robbing Gulls and Terns. Social when breeding, solitary at other times.

a. Skuas. Megalestris.

Size, large, about that of Herring Gull; form, robust; dusky brown throughout, a little lighter below; central tail feathers, only slightly projecting, fig. 40.

1. SKUA, *M. SKUA*. 22.00; dull brown, streaked on back and neck with pale cinnamon and beneath often with pale cinnamon and brownish; a distinct white spot on base of primaries. Young, more distinctly streaked with lighter colors especially on head and neck.

Fig. 40.



F, **A**, a, 1. 1-2

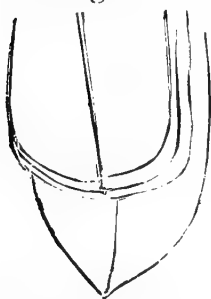
Coasts and islands of the north Atlantic; not very common off the coast of N. A. but seldom seen near the land; casual as far south as N. C.

b. Hunter Gulls, Jaegers. *Stercorarius*.

Size, medium, about equal to Laughing Gull, generally paler than a, often whitish below banded with darker; central tail feathers, decidedly projecting, figs. 41, 42. Occur along the coast, frequently near the land, sometimes flying over it.

1. POMARINE JAEGER, *S. POMARINUS*. 20.00 to 23.00; central tail feathers, broad, rounded at ends, fig. 41. LIGHT

Fig. 41.



PHASE:- top of head and upper parts, dusky slate; rest of head, with nape, and lower parts, white; ear coverts, straw-yellow; under tail coverts, slaty. DARK PHASE:- uniform sooty-slate. Young, differ from the dark phase in being more or less banded below with buff, but in adults all stages occur between the light and dark phases, consequently many specimens are more or less

F, **A**, b, 1. 1-2. banded below with dusky. Breeds in the northern portion of the northern hemisphere on sea coasts and inland waters; migrates southward in Aug. Sep. and Oct.; winters far south: goes north in May; not uncommon off the coast, but not often seen near the land.

2. PARASITIC JAEGER, *S. PARASITICUS*. Differs from 1 in being smaller (15.00 to 21.00), in having the central tail

feathers, narrowed and pointed at tips, fig. 43; the sides of head and the nape are both straw-yellow; there are also light and dark phases with intermediate plumages as in 1. Breeds in the northern parts of the northern hemisphere; migrates south in July, Aug. and Sep.; winters from N. J. to S. A.; goes north in May and early June; very common, often seen from the land, fig. 42.



F, A, b. 2. 1-10.

3. LONG-TAILED JAEGER, *P. LONGICAUDUS*. About the size of 2, but differs in having the central tail feathers Fig. 43.



Fig. 44. much longer, fig. 44, projecting in adults 8.00 to 10.00, in being lighter on the back, in having the tarsus bluish and feet black, not both black as in 1 and 2. In the young, when the tail feathers are short and much as in 2, the best distinguishing character is the color of the shafts of the primaries, the three outer of which only are white (not all as in 2) and these become dusky at the tips. Breeds in the Arctic Regions, migrating southward in Aug.; northward in May; exact

F, A, b, 2 & 3. 1-2 winter range, unknown.

B. GULLS. *Laridae*.

Birds of varying sizes, in the adult stage white beneath and seldom very dark above, usually some shade of bluish which is confined to the back and wings and the area so colored is known as the mantle, figs. 47, 48, 49; bill, curved on upper mandible and somewhat hooked at tip, lower mandible angled and the bill is deeper there than at the nostrils,

fig. 45; wings, usually folding at the tip of tail or beyond it; tail, short, usually square, figs 46 to 49; feet, rather large and fitted for walking; toes, fully webbed, fig. 38. Birds of the ocean, coasts, and large bodies of fresh water. Nests, placed on rocks, on the ground or sometimes in trees, composed of sticks, weeds, etc.; eggs 2 to 4, similar to **A**, but somewhat lighter in color. Procure their food which consists chiefly of fishes, other sea animals and floating garbage, usually by swooping downward from a moderate height, but sometimes, especially when securing living fish, they will make an attempt at diving, but even then they invariably strike the water at an acute angle and never drop directly downward; a few species feed upon locusts and other insects.

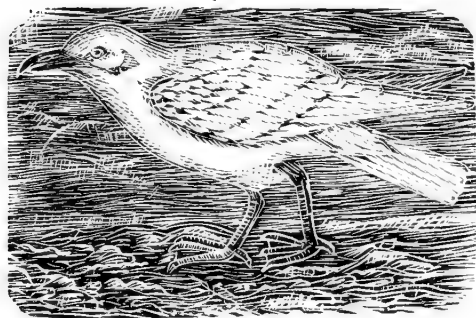


F, B. b, 1.

a. Ice Gulls. *Gavia*.

Size, medium; wholly white; tail square; hind toe, well developed but small.

1. IVORY GULL, *G. ALBA*. Pure white; shafts of primaries, yellowish; feet, black, fig. 46. Young, with feathers of primaries, wing coverts and tail tipped with a spot of dusky. Breeds in the Arctic Regions where it is not uncommon; migrating south in winter along the coast of N. A. to Labrador and Newfoundland, casually to New Brunswick



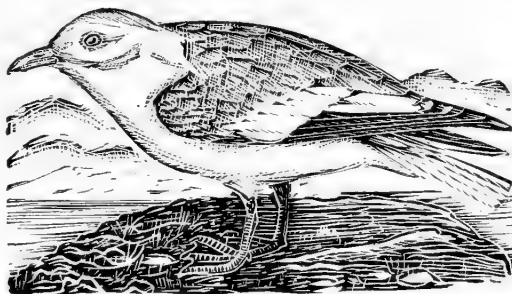
F, B, a, 1. 1-10.
and Mass.

b. Ocean Gulls. Rissa.

Size, medium; mantle, bluish; white beneath in all stages of plumage; bill, short, rather slender, fig. 45; tail, slightly emarginate; hind toe, rudimentary or absent. Habits, social.

1. KITTIWAKE GULL, *R. TRIDACTYLA*. 17.00; mantle, bluish-gray; five outer quills with the terminal portions black; otherwise pure white; eyelids, vermilion, iris, brown; bill, yellow; feet, black, fig. 47. In winter suffused with grayish on hind head and neck, and in front and behind eye.

Fig. 47.



F, A, b, 1, 1-10.

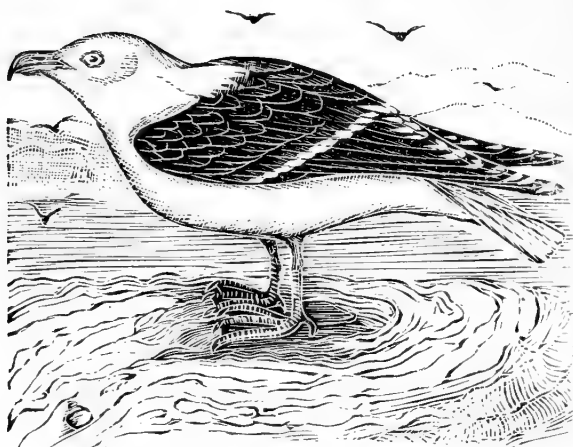
Young, differ from winter adult in having a line crossing inner portion of wing, a patch on back of neck and tip of tail, black, and more black on primaries; iris, yellowish-white; bill, yellow, vermillion spot near tip of lower mandible; feet, pink. Downy young, white, with base of wings, hind neck, back, rump and flanks, yellowish. Breeds from the Gulf of St. Lawrence northward in June; migrating southward in Sept.; winters, from coast of N. E. south to the Middle States, casually nearly to the Bahamas; goes north in April. Occurs off the coast but approaches the land at times, especially off headlands and along open beaches. Flight, graceful, easy, and rather tern-like. Common cry in breeding season, "*Kittiwake, wake wake waker.*"

c. Gulls. Larus.

Size, variable comprising the largest and smallest of the family; adults, white beneath with mantles of varying shades; head and neck, white; grayish behind in winter. Young, brown, assuming the adult dress slowly; tail short and square. Very social. Flight, strong, steady, direct; wing-beats, rather slow; cries, loud, harsh, and considerably varied.

1. GREAT BLACK-BACKED GULL, *L. MARINUS*.

Fig. 48.



Large, 28.00-31.00; mantle, dark slate, appearing black in the distance; primaries, with white tips and spots near ends, fig. 48. Young rather pale brownish, darkest above, and streaked with buff and grayish. Downy young, grayish-white, mottled above with dusky; top of head, spotted with

F, B, c, 1. 1-10.

black. Breeds from the Bay of Fundy northward in May on coasts and islands of the North Atlantic; migrates southward in Sept.; winters from Southern Greenland, as far south as L. I.; goes north the last of April; occasionally a few will remain as far south as Cape Ann, Mass. in summer; common.

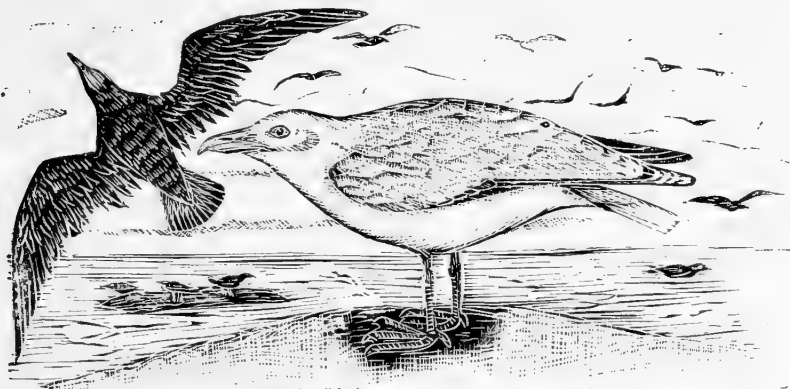
2. SIBERIAN GULL, *L. AFFINIS*. Smaller than 1; 20.00; mantle a little paler and the feet are yellow. Northern Asia; accidental in Southern Greenland.

3. GLAUCOUS GULL, *L. GLAUCUS*. About the size of 1; mantle and wings, pale pearl-gray. Young, grayish-white; brownish-gray below; upper parts, transversely mottled with pale brownish. Downy young, grayish-white, paler beneath mottled and clouded above with dusky and grayish. Breeds in the Arctic regions, where it is common; south in winter regularly to the Gulf of St. Lawrence, and rarely to the Great Lakes and L. I.

4. HERRING GULL, *L. ARGENTATUS*. 24.00; white; mantle, pearl-gray; primaries, with white tips and spots near ends, that on outer feather, usually extending to the tip without being interrupted by a black cross bar, fig. 50; bill, yellow;

feet, pinkish; iris, white. Young, third year, although showing some of the colors of the adult, is more or less mottled

Fig. 49.

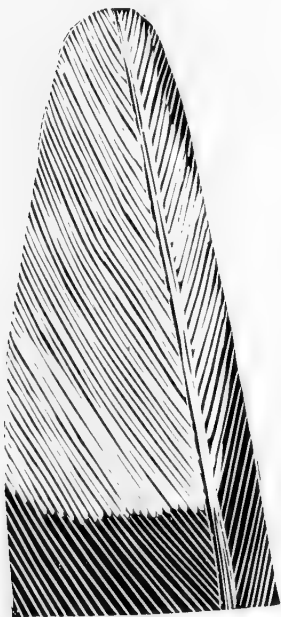


F, B. c, 4. 1-8.

with dusky; bill, brownish. Second year, pale buff above, banded and mottled with yellowish-brown; beneath, nearly

Fig. 50.

Fig. 51.



F, B, c, 4.



F, B, c, 5.

uniform yellowish-brown; no white on primary tips: bill,

dark-brown. First year, nearly uniform dark brown, with comparatively few streakings of buffy above. Downy young, grayish-white; top of head, spotted with black; remaining upper parts, clouded with grayish. Old World, south in winter to the Azores; Cumberland Sound; occasionally on the eastern coast of the U. S.

5. AMERICAN HERRING GULL, *L. SMITHSONIANUS*. Differs from 4 in having the white near the tip of the outer primary, separated from the white of tip by a bar of black, and this is rarely less than .50 wide, fig. 51. Breeds throughout the whole of N. E. from about the latitude of Me. northward; constantly resident as far south as Cape Ann, Mass., on the coast; winters in abundance from Me. to the Carolinas, rather common as far as the St. John's River, Fla., and occasional along the coast to Cuba; migrates south in Sept.; north in April, fig. 49, young in flight.

6. KUMLIEN'S GULL, *L. KUMLIENI*. Size of 4; differs in being very pale, the primaries gray, but with the white marks at the tips showing distinctly, though the wings usually appear quite white in flight. Young, mottled with brownish, much as in 3. Breeds about Cumberland Gulf, migrating south in winter regularly to the Gulf of St. Lawrence and Mass., where it is rare.

7. ICELAND GULL, *L. LEUCOPTERUS*. Size of 4, but similar to 3 in all plumages. Coasts of the North Atlantic, migrating south in winter to Newfoundland and very rarely as far as Mass.

8. RING-BILLED GULL, *L. DELAWARENSIS*. Color, much as in 5; mantle, a little darker;

size, smaller, 19.00; bill, greenish crossed by a black band, fig. 52; iris, pale yellow.

Young, much lighter

than in 5, even in the first year the head, neck and beneath are nearly white, and the back is lighter; the bill is whitish



Fig. 52.

F, B, c, 8.

but the black ring is not very prominent; iris, white. Breeds in northern N. A.; migrates southward over the whole country in Aug. and Sep.; winters from the Carolinas to Cuba and Mexico; common, excepting in N. E. where it is rather uncommon.

9. MEW GULL, *L. CANUS*. Similar in size and general coloration to 8, but the black band on the bill is absent and the gray wedge on the inner web of the third primary is not tipped with white. Europe and Asia; accidental in Labrador.

d. Hooded Gulls. *Chroicocephalus*.

Size, medium or small; head in summer adults, sooty-black, whitish or grayish in winter; white beneath, tinged with rosy in summer; white pattern on primaries, variable, but always different from c; but form, generally similar; flight, somewhat variable; the wing-beats are rather more rapid than in c; social.

1 LAUGHING GULL, *C. ATRICILLA*. 16.00; dark bluish-gray, darker than any species given in c, excepting 1; primaries, often narrowly tipped with white on the three outer; secondaries, more broadly tipped with white; bill, crimson-lake; iris, and feet, brown, fig. 53.

Fig. 53.



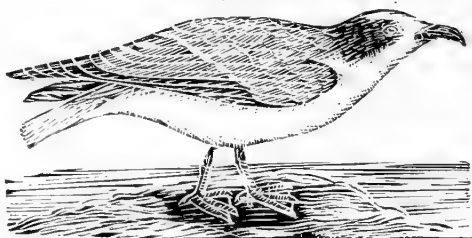
fig. 53. In winter, head white, tinged on back of

F, **B**, **d**, 1. 1-6.

crown, around eyes, and in a band back of them, with bluish-gray like back, fig. 54. Young, differ in having the secondaries gray, a grayish patch on back of neck, head more decidedly grayish, a well defined band back of eye which widens out and extends along side, pearly-gray; this color crosses the breast in a more or less well defined band of varying width leaving throat clearly white; bill, brown; no white tips to primaries; tail, broadly tipped with black. Downy

young, varying from grayish to umber, paler below; head, irregularly striped and spotted, and other parts mottled with dusky. Cries, when breeding,

Fig. 54.



F, B, d, 1. 1-10.

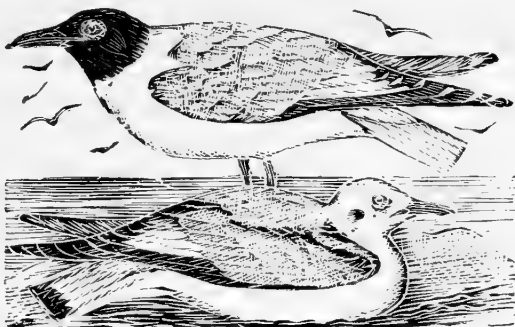
ing, singular, sounding like peals of prolonged, derisive laughter. Nests, placed on the ground. Breeds from the southern coast of Maine southward through the Bahamas. Migrates southward in Sep. and Oct., remaining on the coasts of the Carolinas until Dec; winters in Mexico, Central America, and Northern S. A.; arrive in the Bahamas in spring, about April 15; in Mass. May 1. Common as far north as N. J. but local and rather uncommon north of this; a few still breed at Muskeget Island, Mass., and probably on a few other islands off the shore, and Metinic Green Island, Me.

2. FRANKLIN'S GULL, *C. FRANKLINII*. 14.00; a little smaller than 1, somewhat similar but darker on mantle; primaries, bluish-gray and in all stages of plumage broadly tipped with white; beneath deeply tinted with rose-pink; other stages of plumage corresponding to 1. Breeds from northern Iowa, north through Minn. and the interior of the country; migrates southward in late Sept. through Oct., into early Nov.; winters in northern S. A.; goes north in April. Common; known to the farmers of the west as the Prairie Dove, and feeds largely upon the land, often far from water, subsisting principally upon insects.

3. BONAPARTE'S GULL, *C. PHILADELPHIA*. Smallest of our Gulls, 13.00; mantle, pale bluish; outer wing feathers, white; inner, pale bluish; outer portion of three outer primaries and tips of all the wing feathers, black; bill black, orange at base; feet, bright orange, fig. 55, upper figure. Winter adult; head, white tinged with gray and with a dark spot on either side of the back part. Young; upper wing coverts, brownish; tail, rather narrowly tipped with black, fig.

55, lower figure. Whole of the U. S. and northward, breeding in the Arctic regions; migrates southward in Aug., Sep. and Oct. along the coasts and waters of the interior; winters, in our section, from the Carolinas south to the Gulf of Mexico; goes north in March, April and May. Flight, easy, graceful and tern-like; when migrating, often flies along shore close to land, usually in small companies, sometimes whirling with a sweeping flight much like sandpipers; in the south in winter occurs scatteringly, flying over sounds or creeks, or often far up fresh water rivers. The cry, seldom heard in migration, is harsh and rasping. Common.

Fig. 55.



F, B, d, 3. 1-6.

4. **LITTLE GULL, C. MINUTUS.** Differs from 2 in being smaller, (11.00) and in having little or no black on the wings; in the young the tail is without a black tip. Europe and parts of Asia and Africa; accidental in the Bermudas and on Long Island.

e. Rosy Gulls. Rhodostethia.

Size, small; head, always white in adults; entire plumage, strongly tinged with rosy; tail, graduated, fig. 56.

1. **ROSS'S GULL, R. ROSEA.** White tinged with pink; mantle and lower surface of wing, pale pearl-gray; outer web of first primary and narrow ring around neck, black. In winter the black collar is absent, the head is tinged with pearl-gray and there is a blackish spot in front of eye. Young; upper parts, more or less clouded with dusky and some of the inner tail feathers are tipped with black. Arctic regions, south, within our limits, to Disco Bay, Greenland. Rare.

Fig. 56.



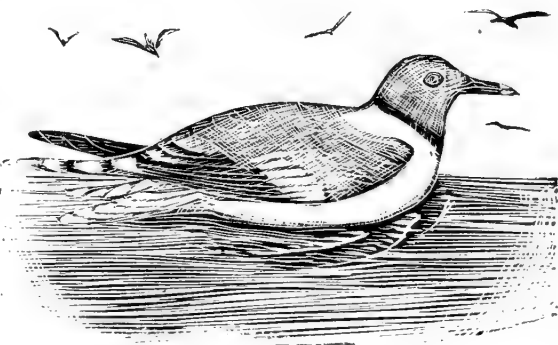
F, B, e, 1. 1-3.

f. Fork-tailed Gulls. *Xema*.

Size, small; tail, prominently forked, fig. 57; mantle, much darker than in e.

SABINE'S GULL, *X. SABINA*. 13.50; head and upper neck, plumbeous, bordered below by a black collar; mantle, dark bluish-gray; Fig. 57.

primaries, black, the five inner more or less marked with white; plumage, otherwise white; bill black, tipped with yellow. In winter, head white with ear-coverts and back of head and neck, plumbeous. Young,

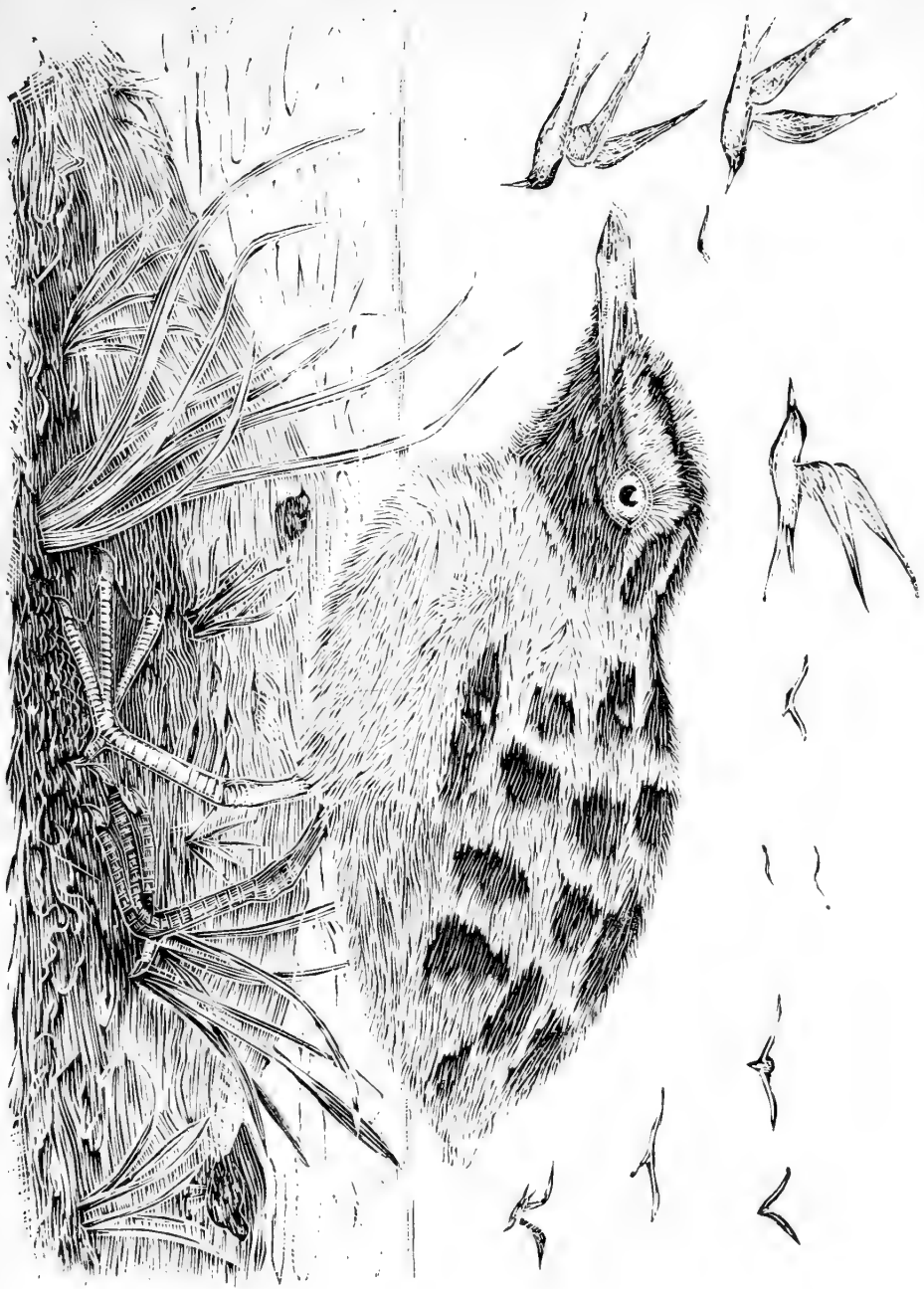


, **B** 1. 1-6. with the mantle, brownish-gray; tail, with a broad black band near end, and this is narrowly tipped with white. Breeds in the Arctic regions; south in winter very rarely to Mass., N. Y.. and the Great Lakes.

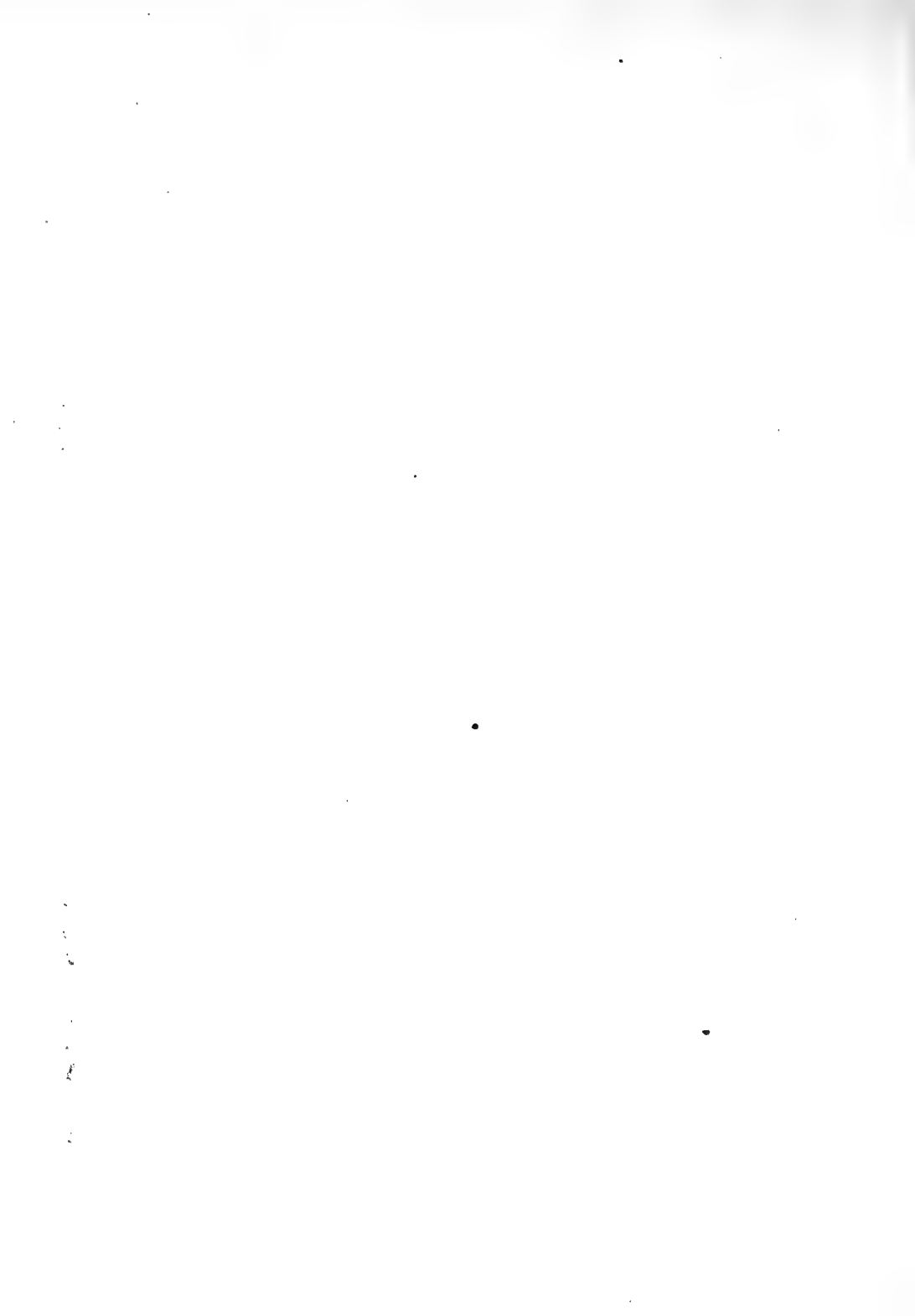
C. TERNS. *Sternidae*.

Birds of varying sizes but more slender and graceful in form than in **B**, with more pointed bills which are never hooked; angle of lower mandible, not so decided as in **B**, plate 4; wings, very long and pointed, 1st primary, longest; secondaries, short; feet, rather small, not well fitted for walking. Occur on ocean coasts and estuaries and on bodies of fresh water. Nests, placed on sand, rocks, or occasionally on bushes; eggs, 1 to 5, similar to **B**. Procure their prey, which usually consists of small fishes, by diving directly downward, often becoming wholly submerged. In flight the bill is frequently pointed downward; in alighting the wings are often stretched upward before folding, much as is done by many waders.





YOUNG OF COMMON TERN.



a. Gull Terns. *Gelochelidon*.

Form, rather robust; bill, thick and somewhat gull-like; fig. 58; wholly black; tail, slightly forked, outer feathers, but little narrowed at tip. fig. 59; web of toes, considerably incised; top of head, black; mantle, pearly; white, beneath; size, moderate.

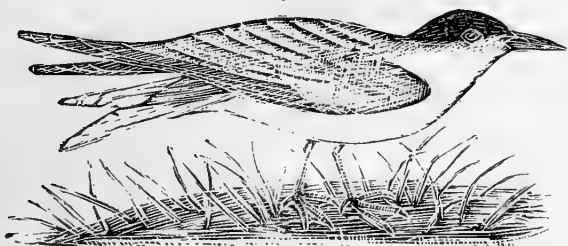
Fig. 58.



F, C, a, 1.

1. GULL-BILLED TERN, *G. NILOTICA*. 14.00; head and hind neck, black; mantle, pale; outer webs of primaries, hoary; outer tail feathers are nearly white; feet, black, fig. 59. In winter, head white more or less tinged on nape

Fig. 59.



F, C, a, 1. 1-7.

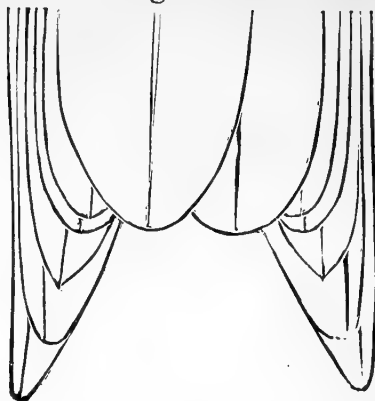
and ear coverts with dusky. Young, more or less tinged with buffy above, and the top of head, hind neck, and back are often streaked with dusky. Downy young, grayish-buff above marked with prominent dusky spots, and with a dusky stripe down either side of hind neck and upper back; white beneath. Nearly cosmopolitan; in N. A. breeds commonly from southern N. J. southward along the Gulf coasts; occasionally wandering in late summer and early autumn as far north as Mass. Flight, rather heavy and slow.

b, Giant Terns. *Thalasseus*.

The largest of the terns, with robust form and long but heavy bill which is not very sharply pointed; inner webs of primaries slaty or gray; tail, much less forked than in a, fig. 60, but color much the same; bill, red.

1. CASPIAN TERN, *T. CASPIA*. 21.00; white; top of head and nape, black; mantle, pale. In winter, back of head, streaked with whitish. Young, pale gray above marked with a few roundish spots of dusky; back of head, dusky, crown, flecked with black; and each tail feather, marked with a sub-terminal dusky spot; bill, dull reddish-orange. Downy young, pale grayish above; back and rump, very finely mottled with darker gray; white beneath, with throat and fore neck, pale gray. Nearly cosmopolitan, breeding southward in N. A. to Va., Texas, Cal., Nevada, and Lake Michigan. Not common along the N. E. coast in Aug. and Sep. Flight, rapid and tern-like. Cries, harsh and rasping.

Fig. 60.



F, C, b, 1. 11-2.

c. Crested Terns. *Actochelidon*.

Form, more slender than in *b*; bill, more slender and pointed; tail, more deeply forked and the outer feathers are narrowed terminally; occipital feathers, lengthened, forming a kind of crest, fig. 61, and lanceolate in form; inner portion of inner web of primaries, white; colors as in *b*.

1. ROYAL TERN, *A. MAXIMA*. 20.00; mantle, pale; beneath, white tinged with rosy; cap, deep black; tail and its coverts, ashy-white; bill, orange; feet, black. In winter the occiput is streaked with white. Young, sparingly spotted above with brownish; tail, tipped with dusky. Tropical America and warmer parts of N. A.; breeds from the coast of Va., southward, late in May and in June, wandering rarely to Mass. and the Great Lakes; winters from the Carolinas, southward at which season it visits rivers often far from the ocean. Abundant. Cries, harsh, loud and often piercing. Flight, rather heavy and not very graceful.

2. CABOT'S TERN, *A. ACUFLAVIDA*. Smaller than 1 (14.00) and more slender; bill, more slender, black, yellow at tip, Fig. 61.

Flight, easy and graceful. Cries, harsh. Breeds commonly on the Bahamas and Gulf Coasts in May and June, wandering northward in late summer, casually as far as Chatham, Mass. Winters on the Florida Keys.



F, C, c, 2. 1-7.

d. Pale-backed Terns. *Sterna*.

Size, rather small; mantle, pearly-blue; black cap present in adults in summer in all of our species excepting 1; bill, very slender and sharply pointed, plates

Fig. 62.



F, C, d, 2.

3 and 5; tail, deeply forked with outer feathers narrowed terminally, figs. 62, 64; graceful, swiftly flying birds popularly known as Sea Swallows.

1. TRUDEAU'S TERN, *S. TRUDEAUI*. About the size of 2; form similar; head, white, dusky spot on either side extending from bill to ear coverts and enclosing eye; under tail coverts, white; outer primaries, silvery-white; remainder of plumage, pearl gray; bill, black, yellow at base and tip. In winter, entire lower parts, white. Southern S. A.; accidental in N. J. and Long Island (Audubon).

2. COMMON TERN, *S. HIRUNDO*. 14.00; mantle, rather dark; outer tail feather not extending beyond tip of the

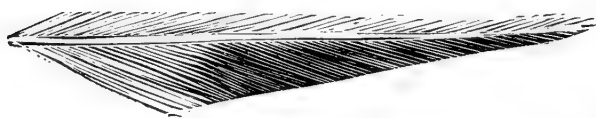
folded wing and its outer web is dusky, inner, white; outer web of outer primary, black; beneath, tinged with pearly on abdomen only; bill, red, black on terminal half, plate 3; feet, rather light red. In winter the crown is more or less white but the occiput is always black. Young, line along forearm, dusky; rump and upper tail coverts, gray; tail shorter, tips of feathers, not much narrowed, fig. 63; bill, black, yellow at base of lower mandible; pure white beneath. Downy young; buff above of varying shades marbled with dusky; white beneath; throat, more or less dusky. Cry, "Te arr" with the last syllable prolonged; alarm note, "Ki" repeated rapidly many times. Greater part of northern hemisphere and Africa; in N. A. breeds along the coast and in suitable places in the interior, but east of the Plains, from Fla., Texas, and Arizona to the Arctic regions in May and June; comes north in early May; goes south in Sep., but a few linger as far north as Mass. until the middle of Oct.; winters south of the U. S. Abundant.

Fig. 63.



F, C, d, 2. 1-10.

Fig. 64.



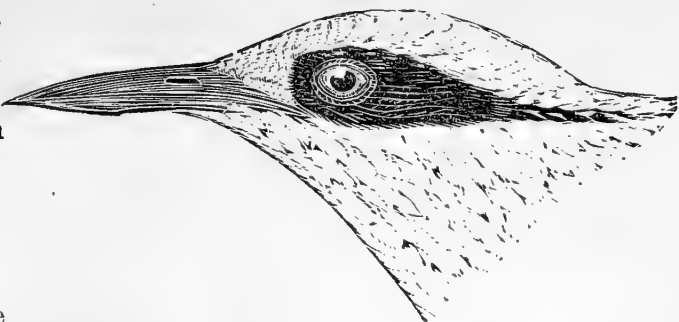
F, C, d, 3.

3. FOSTER'S TERN, *S. FOSTERI*. Differs from 2 in having the bill black, yellow at tip only; with the outer web of the outer primary, hoary; outer web of outer tail feather, white. In winter the whole of the black cap is overwashed with whitish thus including the occiput, but there is a patch of black on either side of head surrounding eye and extending over ear coverts, fig. 65; this mark also characterizes the

neath; throat, more or less dusky. Cry, "Te arr" with the last syllable prolonged; alarm note,

young; feet, yellow. Breeds from Manitoba southward to Va., Ill., Texas, and Cal., thus chiefly in the interior; winters from the Carolinas southward to Brazil; wanders occasionally to the coast of Mass.

Fig. 65.



F, C, d, 3. 1-2.

Cries, similar to 2 but harsher. Common.

4. ARCTIC TERN, *S. PARADISAEA*; differs from 2 in having the bill nearly red, plate 5, the under parts pearly gray and the feet coral-red. Young have the bill wholly black, the feet yellow, but the rump is always abruptly white. Northern hemisphere; in N. A. breeding from Me. (formerly Mass.) northward; winters south of the U. S.; time of migration like 2; cries also similar. Not now at all common on the coast of the U. S.

Fig. 66.

5. ROSEATE TERN, *S. DOUGALLI*; differs from 2 in being more slender in form with a longer tail which is all white, and the outer feathers are very narrow; strongly tinged with rosy below; bill, usually all black, but is sometimes orange at base; feet, yellow, plate 6. The young have the back quite heavily but irregularly banded and mottled with dusky, and the cap

dusky narrowly streaked with white, fig. 63; the outer web



F, C, d, 5. 1-10.

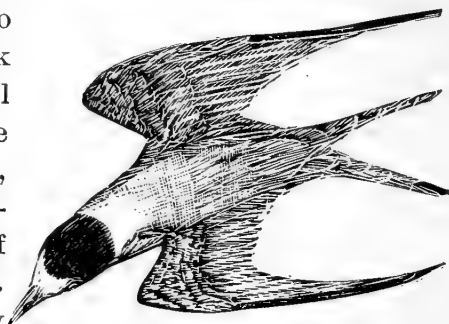
of the outer feather of the short tail is nearly white; feet, black. The adult is the most graceful as well as the most beautiful of our terns. Cry, "O-ar-ar-ar"; a peculiar rolling sound difficult to imitate; it is harsher than in 2. Temperate and Tropical regions, breeding on the Atlantic coast of N. A. from the south shore of Mass. southward; winters far south of our limits; comes north in May; goes south in Sep. Common.

e. Little Terns. *Sternula*.

Size, small; bill, very slender; form much as in d and the colors are much the same, but there is a sharply defined lunette of white on the forehead, fig. 67.

1. LEAST TERN, *S. ANTILLARUM*. Our smallest Tern, 9.00; entire upper parts, including tail, pale, pearl-grey; two outer primaries, sooty-black on outer portion; outer tail feather, mostly white; pure white beneath; bill, yellow, black at extreme tip; feet, yellow. In winter the white of forehead is more extended. Young, with a patch of dusky on wing and with U- or V-

Fig. 67.



F, C, e, 1. 1-6. shaped marks of dusky on back; tail, not as deeply forked. Downy young, nearly white; grayish above often sprinkled with blackish. Breeds from the south shore of Mass. southward from late May (Bahamas) to early July (Mass); migrates north in May and June; goes south in Sep.; winters south of our limits. Rather uncommon now in N. E. but abundant further south. Cries, "Tee-deel-deedle" and when alarmed, a harsher, more decidedly given, "Hoyt" repeated at irregular intervals. Flight, not as steady as in the other species of Terns given, but rather jerky, the bird falling a little between every wing-beat. In common with all of the Terns already given, and the two following, this species has the habit of darting obliquely downward when flying in company

with several of its fellows, this general movement being made suddenly in response to a cry given by some member of the flock that evidently acts as a leader.

f. Dusky-backed Terns. *Haliplana*.

Size, rather large; mantle and head, dusky or black; bill, slender, and with feet, wholly black; tail, deeply forked, figs. 68, 69: flight, much as in d; tropical and subtropical in distribution. Egg, single, lighter in color than in d.

1. BRIDLED TERN, *H. ANAETHETUS*. 14.00; form; slender; above, rather pale brownish-slate becoming lighter,

Fig. 68.

nearly white, in a collar on back of neck and on tail, the outer feather of which is white excepting at tip and all the others white at base; three outer primaries have a pure



F, C, f, 1. 1-6.

white space on the middle of the inner web which narrows to a point terminally; top of head, brownish-black with a well defined frontal lunette the horns of which extend backward over and behind eye; beneath, pure white, fig 68. The young have the white of the forehead more extended and the back is grayish more or less streaked with white. Flight, swift and graceful, the wing-beats being long and sweeping. Cries, rather shrill; ordinary note, "*Killick*", often repeated; the alarm note is a croak; the signal for the flock to dart downward when flying is a shrill, snarling note. Tropical sea coasts in general; breeds commonly on the Bahamas in May in places rather apart from other Terns, nesting under rocks; appears on the Bahamas the last week in April and disappears in autumn; accidental in Florida.

2, SOOTY TERN, *H. FULIGINOSA*. Differs from 1 in being larger. 16.00; not as slender; darker above, uniform

sooty-black; the feathers of the tail are not white at base, but the outer is nearly white, dark on terminal portion of inner web only; middle of inner web of outer primaries, gray, and the horns of lunette extend only to middle of eye, fig. 69. Young, sooty brown throughout

Fig. 69-

**F, C, f. 2. 1-6.**

paler below; wing coverts and scapularies narrowly but distinctly tipped with white. Cries, harsh; ordinary note, "*Quank*", repeated irregularly; alarm note, "*Qu-ank*" rapidly repeated; also gives a harsh, snarling cry as a signal for darting downward through the air. Flight, rather heavier and less graceful than in 1. Range, similar to 1 in general, but breeds commonly on the Tortugas Islands, Fla. and occurs regularly, but rarely along the coast to S. C. and casually to N. E. Abundant.

g. Short-tailed Terns. *Hydrochelidon*.

Fig. 70.

**F, C, g, 1. 1-5.**

Size small; Mantle, deep plumbeous; bill, slender, black or dark-brown; tail, shorter than tips of folded wings and but slightly forked. Eggs 3, 4, averaging darker than any others in the family.

AMERICAN BLACK TERN. *H. SURINAMENSIS*. Dark plumbeous above becoming sooty black on nape, head, and wings;

beneath, sooty-black; under portion of wings and under tail coverts, white. In winter, the head, neck, and lower parts are white; eye-ring and ear coverts, dusky. Young, with the back marked with brownish and the sides washed with plumbeous. Breeds from middle U. S. west of the Alleghanies, northward in May. Common; not uncommon on the coast of N. E or near it in Aug. and Sep.; rare in June; winters in S. A.

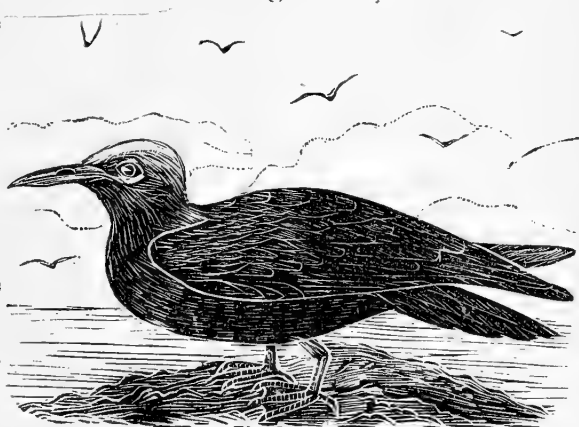
2. WHITE-WINGED BLACK TERN, *H. LEUCOPTERA*. Differs from 1 in having the tail and upper coverts white. Europe; one specimen only taken in America, at Lake Koshkonong, Wis. a number of years ago.

h. Noddies. Anous.

Size, large; color, sooty-brown throughout, becoming hoary or white on top of head; tail, graduated. Egg, single. Birds of tropical and sub-tropical sea coasts.

1. NODDY, *A. STOLIDUS*. 15.00; forehead and top of head, white, gradually grading into the plumbeous of neck and sides of head; spot in front of eye and upper eyelid, black; bill and feet, black. Intertropical seas; breeds on the Tortugas Islands, Fla. in May; common; of rather uncommon occurrence

Fig. 71.



F, C, h, 1. 1-5.

along the coasts of the South Atlantic and Gulf States. Flight, rather erratic, with long, sweeping wing-beats, while the bird keeps low over the water, giving it a petrel-like appearance; in sitting, unlike the other terns, which usually keep the head on a level with the body, it holds its head high, giving it a dove-like aspect. Cries, a series of croaks.

A gentle bird which may be taken from its nest without it making any effort to defend itself.

D. SKIMMERS. Rynchopidae.

. Birds of general tern-like appearance with very long

Fig. 72.



F, D, a, 1. 1-5.

wings and short, slightly forked tails; bill, excessively compressed, both mandibles being thin and knife-like terminally; the lower mandible considerably exceeds the upper in length and is crossed by many oblique ridges, Fig. 72.; color, mainly black above and white beneath.

a. Skimmers. Rynchops.

Characters as above.

1 BLACK SKIMMER, R. NIGAR. 18.00; beneath, forehead, tips of secondaries, inner primaries and tail, excepting middle feathers which are brownish, white; bill, black, basal portion and feet, vermillion. In winter, brownish above with a broad white collar crossing neck. Young, with the feathers of head and back more or less tipped with white and the tail is tipped with brownish. These singular birds are found resting on sand bars in large flocks during the day and, when startled, move with an eccentric flight, with long,

sweeping wing-beats; at nightfall they separate into small companies, and forming lines, fly up estuaries and rivers, keeping close to the water with the elongated lower mandible beneath the surface, in this way securing food which must consist of substances that float upon the surface. Cries, harsh and abrupt, much like the bark of a young puppy. Eggs placed upon sandy spots near the sea, 2, 3, white, handsomely mottled with dark-brown and lilac. Sea coasts of the warmer portions of America; breeding on the Atlantic side from N. J. southward in May; winters from the Fla. Keys southward.

G. SHORE BIRDS. *Limicolae*.

Long legged and often long winged birds with elongated tertiaries, and are usually found in the vicinity of water; bill of variable length, sometimes shorter than head but often longer and nearly always grooved on either side of both mandibles; size never very large, often small; colors, not bright, grays, white and buff or reddish buff being usual, occasionally relieved by black markings. Eggs, usually 4 almost invariably placed on the ground. Young, covered with down and active when hatched. Inhabit nearly all regions of the globe.

A. PHALAROPES. *Phalaropodidae*.

Sandpiper-like birds with duck-like habits; breeding far inland but passing a greater portion of their lives on the open ocean; folded wings at least reaching to end of short tail; feet with tarsus compressed; toes, 4, the anterior provided with lateral and basal membranes, figs. 73, 74, 79; plumage beneath, greatly thickened closely blended and duck-like enabling the birds to rest lightly on the water and to swim with ease, fig. 78. Sexes, dissimilar, the females being brighter than the males. Gregarious. Notes, weak whistles.

a. Coot-footed Phalaropes. *Crymophilus*.

Bill, short, thick and broadened at the end, fig. 74; lateral membranes of toes, slightly lobed, fig. 73; summer female, entirely reddish beneath.

1. RED PHALAROPE, *C. FULICARIUS*. 8.00; summer female, beneath, purplish-cinnamon extending around on neck behind; sides of head, white; top of head, dark plumbeous; back, light reddish or buff streaked with black; rump, white, fig. 75. Summer male, smaller, duller, with the top of head streaked with buffy. Winter adult, head, neck, and lower parts, white; occiput and space around eye, plumbeous; back, pearl-gray. Young, above dull black; wing coverts and rump, plumbeous with all of the feathers more or less tinged with ochraceous; white beneath, throat and breast tinged with brownish-buff. Downy young, bright reddish-buff above. darkest on crown, everywhere broadly striped with black; dull white beneath with chin, throat, and chest tinged with reddish-buff. Northern hemisphere, breeding far northward; migrating southward in winter in N. A. as far as

Fig. 73.

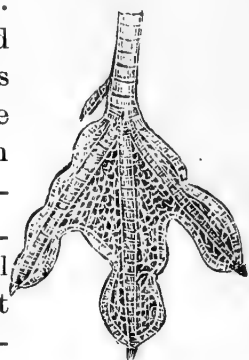


Fig. 74.



G, A, a, 1
the Middle States; not uncommon off the coast of N. E. in Sep., Oct., and May; rare in the interior.

b. Fringed-footed Phalaropes.

Steganopus.

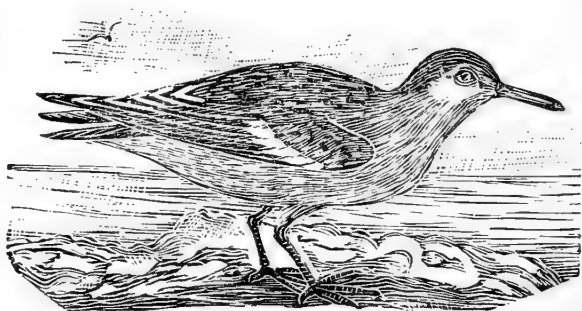
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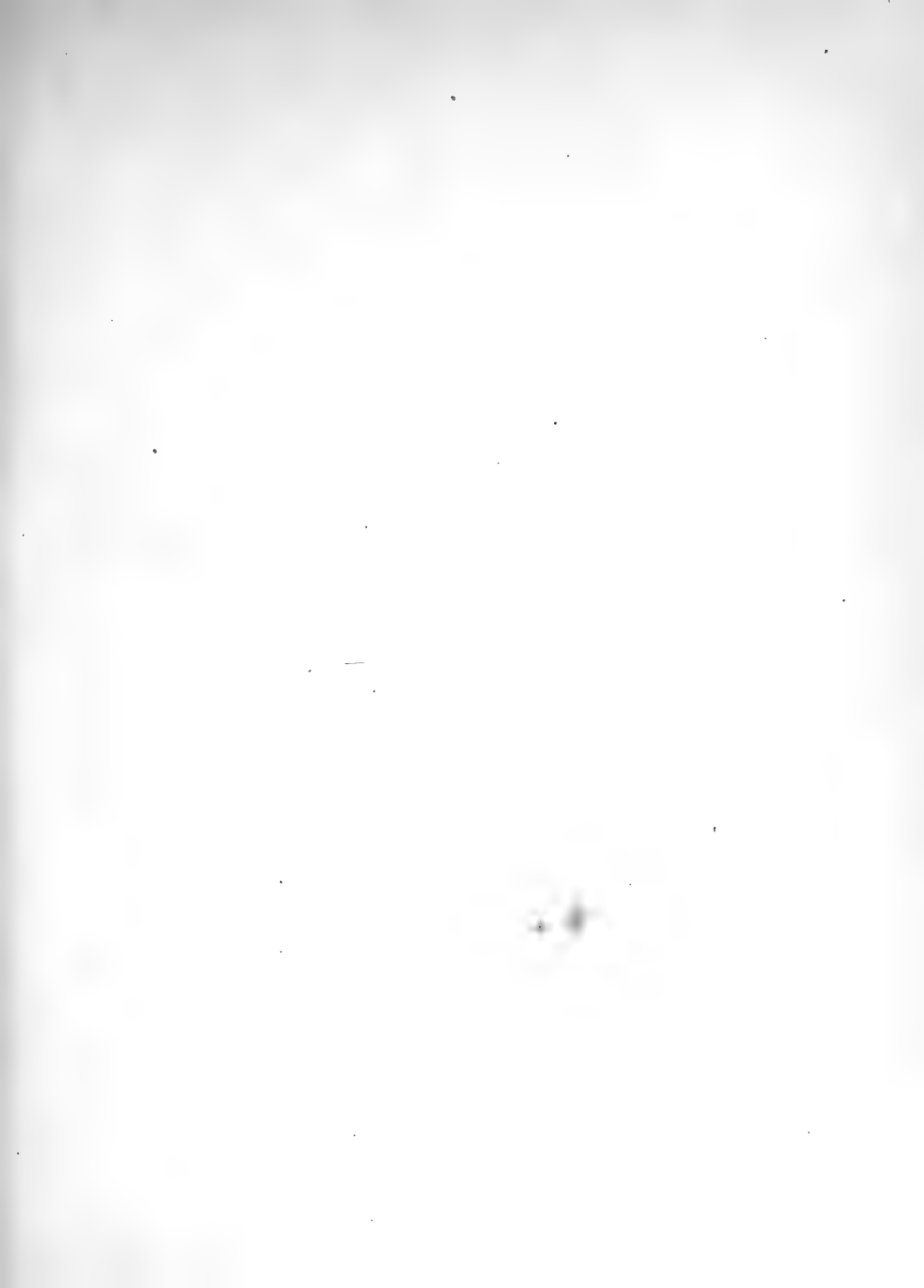
Bill, long, slender and awl-like, fig. 77; lateral membrane of toes, continuous and fringe-like, fig.

Fig. 75.

76. Summer female, white below, reddish on neck only.

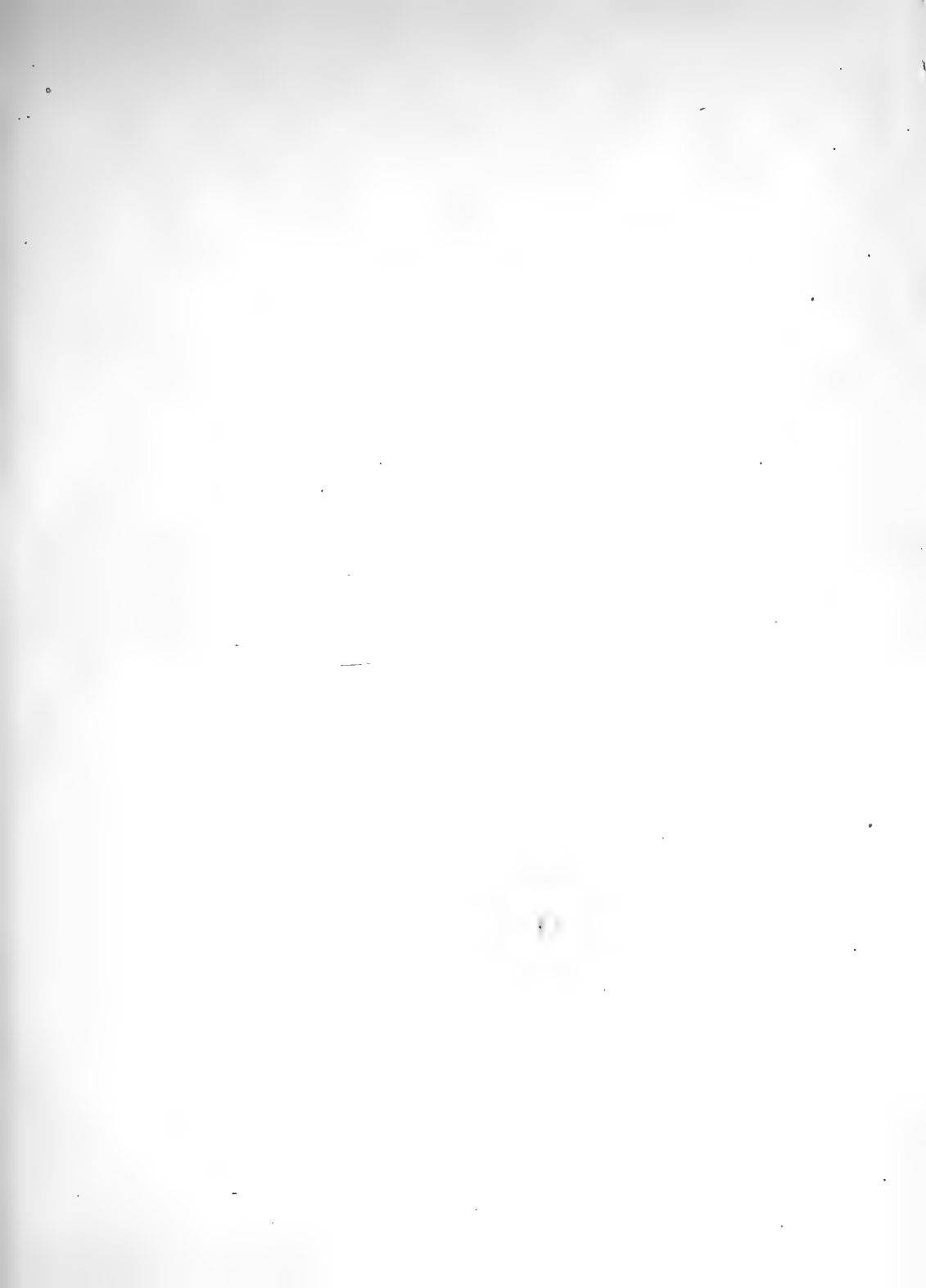
1. WILSON'S PHALAROPE, *S. TRICOLOR*. 9.00; white beneath, pale buffy-red on neck;

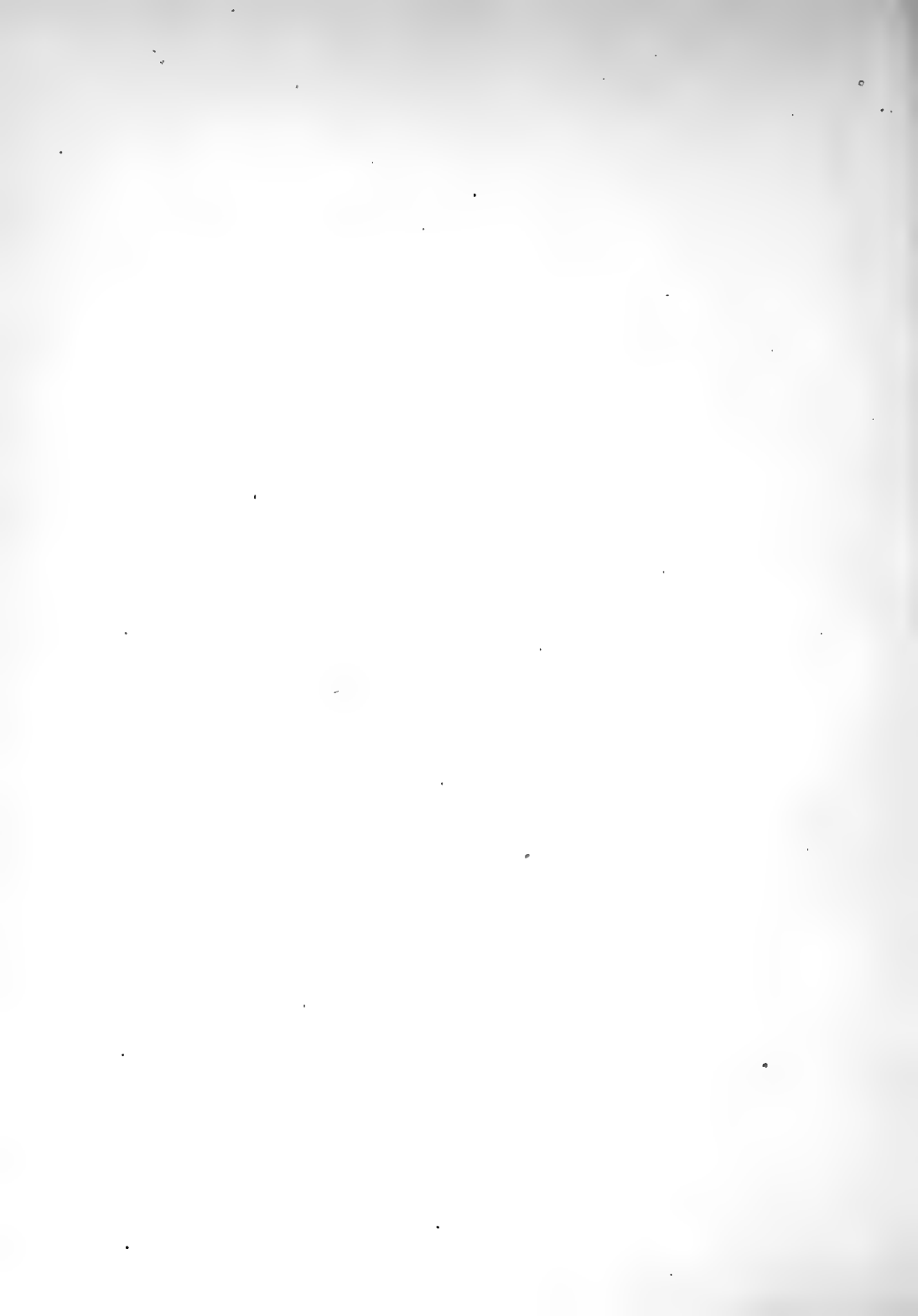
**G, A, b, 1. 1-4.**





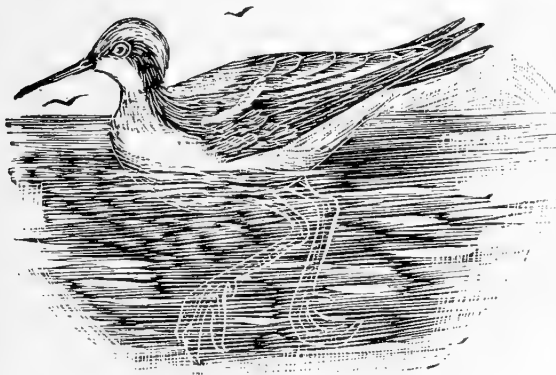
HEAD OF ARCTIC TERN.





top of head, grayish-white which becomes pure white on occiput and back of neck, this passes into plumbeous-gray on the back to become abruptly white on the upper tail coverts and a portion of the tail; remainder of tail, gray; a widening line of black passes through eye to back of head and neck where it becomes chestnut, then narrowing, passes along sides of back to join a broader line of the same color on the scapularies, fig. 78. Summer male, much duller but with the same markings indicated. Winter adult, ash-gray above; upper tail coverts and lower parts, white.

Fig. 78.



G, A, b, 1. 1-4.

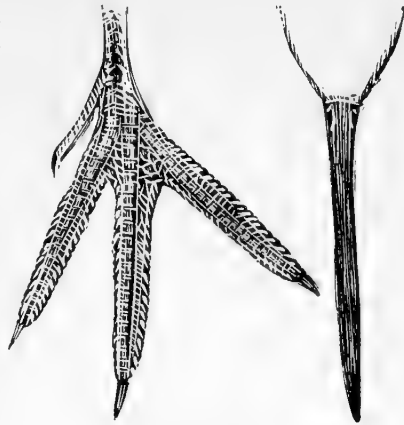
band near tail and a black spot on flanks. Temperate N. A.; breeding from southern Ill. and Utah north to the Saskatchewan region; in winter to Brazil and Patagonia; very rare on the N. E. coast in spring and autumn (May and Aug.).

c. Lobe-footed Phalaropes. Phalaropus.

Smaller than in b, but with the bill similar; lateral toe

Fig. 76.

Fig. 77.



G, A, b, 1.

Young, blackish above more or less streaked with buff; superciliary stripe, upper tail coverts, and lower parts, white; neck, tinged with buff. Downy young, bright tawny above, paler beneath; black stripe on occiput and hind neck and three broad ones on lower back and rump; a black

membrane, distinctly lobed, fig. 79; no distinct red markings above.

1. NORTHERN PHALAROPE, *P. LOBATUS*. 7.50; above, dark plumbeous striped on back with reddish-buff; upper tail coverts, like back; distinct wing band and under parts, white; sides of neck and chest, rufous. Summer male, much duller, the rufous confined to sides of neck, and the chest is mottled with white and grayish. Winter adult, forehead, superciliary line, and beneath, white; above, grayish; patch on sides of head, blackish, fig. 80. Young differ from last in being streaked above with reddish-buff. Downy young, bright taw-

Fig. 79.

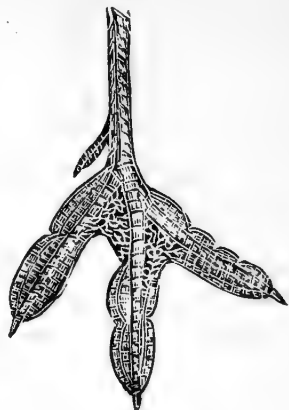
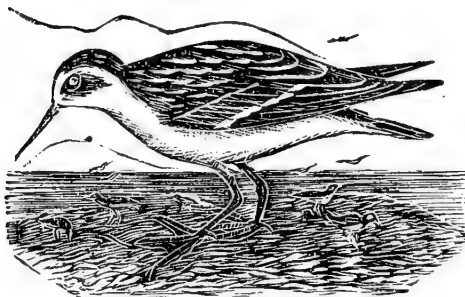
**G, A, c, 1.**

Fig. 80.

**G, A, c, 1. 1-4.**

ny above; three black stripes on rump; triangular patch of black on crown; black line over eye; white beneath, throat, pale tawny. Northern hemisphere, breeding far north; winters off the coast of the Carolinas southward; common off the coast of N. E. from mid-

dle Aug. to early Oct.; occasionally seen on beaches and rarely on the waters of the interior; migrates north in May when it is less common.

B. AVOCETS AND STILTS. *Recurvirostridae*.

Legs, greatly lengthened, longer than any other in **G**; tibia, naked for at least half its length; toes, with a well developed basal web; rather large birds of social habits that usually occur in the vicinity of fresh water.

a. Avocets. *Recurvirostra*.

Bill, flattened, longer than head and decidedly recurved, fig. 81; toes, 4, the anterior fully webbed; wings, short, when

folded not reaching end of tail. Colors, black, white, and reddish. Sexes, similar.

1. **AMERICAN AVOCET**, *R. AMERICANA*. 17.00; head, neck, and chest, light cinnamon; wings and two broad stripes on back, brownish-black; tail, ashy; white elsewhere, fig. 81. In winter, head, neck, and chest, white tinged with bluish. Swims well and frequently alights on the water. Cries, harsh and continuous. Breeds in the interior west of the Mississippi River, from Kansas north to the Saskatchewan and Great Slave Lake; exceedingly rare in Eastern U. S.; winters south to Guatemala.

Fig. 81.



b. Stilts. Himantopus.

Bill, not flattened, slender
Fig. 82.



G, B, b, 1. 1-4.

G, B, a, 1. 1-4.

and nearly straight; toes, three, webbed at base only; wings, long, when folded reaching beyond end of tail, fig. 82, colors, black and white. Sexes, dissimilar.

1. **BLACK-NECKED STILT**, *H. MEXICANUS*. 14.00; male, top and sides of head below eye, back of neck, middle of back, and wings, glossy, greenish-black; tail gray; spot behind eye and parts not mentioned, white; bill, black: iris, red; feet and legs, carmine, fig. 82. The female differs in having the back slaty-brown and the other

black portions duller. Young, differ from the last in having the feathers of the back bordered with dull white and the top of head finely mottled with the same. Downy young, yellowish gray above, paler beneath, mottled and spotted above with dusky with a median line on head of the same. Breeding note, "*Put*" repeated many times at regular intervals as the bird both sits and flies; alarm note, a series of harsh screams. Flight, steady, not swift, wing-beats rather slow and sweeping low, the head is held partly back but the legs are fully extended, or in short flights are held dangling; although it often wades in water so deeply that it nearly floats, it seldom swims; a number will sometimes sit together in the water occasionally moving the primaries up and down with a fan-like movement while the secondaries are kept motionless. Breeds from northern U. S., west of the Mississippi River, southward and in Fla., the Bahamas, and the Antilles in late April and early May. Common; very rare in eastern U. S. north of Fla.; arrives in Fla. about the middle of March; goes south in early Oct.

C. WOODCOCKS AND SNIPES. *Scolecopacidae*.

Birds of fresh water swamps and marshes; bill, much longer than head, covered with soft skin sensitive near tip (rough-

Fig. 83.



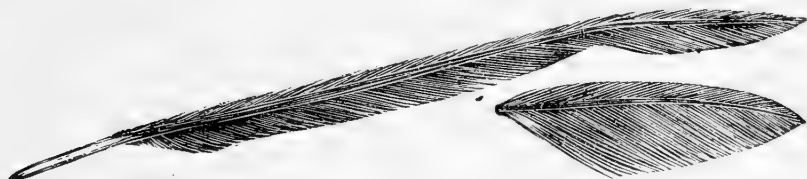
G, C, b, 1.

ened by pits and wrinkled when dry, fig. 83), with it the birds procure worms and similar animals by probing in mud or soft earth; in order to enable the birds to perceive danger when the bill is buried to the base, the eyes are placed far back in the head directly over the ears, figs. 85, 86; neck, and wings, short, folding within the tip of the short, rounded tail; legs, short; toes, four, long, no basal webs; plumage the same at all seasons; sexes, similar. All of the species are well known game birds.

a. Narrow-quilled Woodcocks. *Philohela*.

Very short-necked stout-bodied birds that live in swamps and are protectively clad in dull reds and wood browns; wings, very short, folding at the base of tail, and with three prima-

Fig. 84.



G, C, a, 1.

ries, somewhat shorter than the fourth and much narrower than the others, fig. 84; tibia, feathered to the tarsal joint. Solitary in habit, or occasionally found in scattered flocks.

1. AMERICAN WOODCOCK, *P. MINOR*. 11.00; dark brown above, with three distinct bands of reddish-buff crossing occiput, and otherwise finely banded with reddish-buff and mottled with ashy brown; forehead to eye, sides of head, and tip of tail, ashy brown; a dusky line from bill to eye; beneath, reddish buff brightest on sides and flanks, ashy on neck beneath; downy young, rusty buff throughout, mottled and spotted above with brown; iris, bill, and feet, brown. Flight, direct and swift, with rapid wing-beats, sometimes accompanied by a whistling sound, commonly supposed to be vocal; from early March to July gives what is known as the sky song; the bird selects an open spot near its breeding ground, to which it resorts at twilight; the performance begins with the utterance of a number of bleating notes not unlike the cry of the nighthawk, but rather more tremulous and not as sharp; this sound is repeated at regular intervals from a few to many times, then the bird rises, and giving the whistling flight-sound, describes a wide circle, two or three hundred yards in diameter, but constantly ascending and circling spirally, each successive circle being smaller than the last, until he has reached a point at the apex directly above the spot from which he had started, then he drops downward

with a rocking motion on extended wings, uttering a rather subdued, liquid whistle. Alighting, this performance is repeated, often a number of times during an evening. To hear this song the observer should station himself shortly after sunset at a point near enough to a known spot where a woodcock performs to hear the opening bleats, but not near enough to disturb the bird when he comes from the swamp. Just as soon as the bird rises to begin the upward flight walk very



Fig. 58.

G, C, b, 1.1-6.

swiftly forward, taking care to drop flat on the ground as the bird approaches the earth; thus by exercising caution and keeping perfect silence, it is possible to approach within a few yards and witness the bird's behavior when on the ground. Alder swamps are favorite resorts of the woodcock and in them it may be found in early spring, at which time it is not especially shy. Breeds throughout Eastern N. A. from the British Provinces, south to Fla., in March and April, placing its nest in woodlands near swamps; winters in the Southern States, goes south in Oct. and Nov.; comes north in late Feb. and Mar. Quite common, but far less so than in former years, fig. 58.

b. Broad-quilled Woodcocks. *Scolopax*.

Larger, and differs otherwise in having the outer primary longer than the second and as broad as the others.

1. EUROPEAN WOODCOCK, *S. RUSTICOLA*. Differs from a, 1 in being larger (13.00) and in being distinctly banded beneath. Northern parts of eastern hemisphere; occasional in Eastern N. A.

c. Snipes. *Gallinago*.

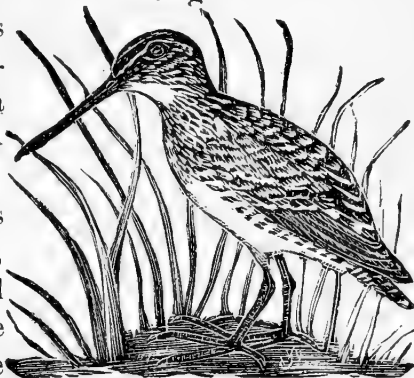
More slender birds with longer necks that live in marshes and are clad in browns and reddish-grays; wings longer than

in **a**, reaching beyond middle of tail, the first primary is longest and all are broad; tibia, not feathered to the tarsal joint. Eggs, placed in marshes. Not as solitary in habit as in **a**, numbers often associate together, especially in winter.

1. WILSON'S SNIPE, *G. DELICATA*. 11.00; dusky-brown above streaked, mottled, and banded with reddish-buff, rufous and grayish-white; median line of buff on head; tail, black with a sub-terminal band of pale chestnut; white beneath and on side of head, grayish on lower neck and chest mottled with dusky; dusky line in front of eye; under wing coverts, axillaries, and sides, distinctly marked with black bands that are as wide, or wider, than the white interspaces.

It is almost impossible to see this bird on the ground as it lies very close; when startled, it rises quickly and flies swiftly in a zigzag course, uttering its singular bleating "*Scape*" as it goes; after flying some twenty yards its course becomes more direct, but it still winds and circles, and after rising to a considerable height, and going some distance

Fig. 86.



away, it is quite apt to return and

G, C, c, 1. 1-6.

alight near where it started. Upon its breeding grounds, and occasionally when migrating, it produces the sound called winnowing. The bird rises high in air and when it reaches a certain altitude darts rapidly in a zigzag, flight much like a Nighthawk, at the same time giving the sound which has received the appropriate name of winnowing; whether this is made by the wings or is vocal is difficult to decide. Breeds from northern U. S. northward, occasionally further south; winters regularly from the Carolinas southward to northern S. A., and irregularly as far north as Mass.; comes north in April and May; goes south in Sep. and Oct.

2. EUROPEAN SNIPE, *G. GALLINAGO*. Differs from 1 in having the white bandings on the under wing coverts, axillaries, and sides, wider than the dark interspaces, and the tail feathers are broader. Europe, northern Asia and Africa; frequent in Greenland; accidental in the Bermudas.

D. SANDPIPERS, TATTLERS, GODWITS, CURLEWS, ETC. *Tringidae*.

Birds which usually occur in marshes, either salt or fresh or on sea beaches; a few species occur on dry land but never in wooded swamps; eyes, placed in front of ears; wings, longer than in *C*; tibia, never feathered to the tarsal joint; front of tarsus covered with a continuous row of scales, toes four, excepting in *i*; highly gregarious in habit; summer and winter plumages are very different; sexes, similar. General flight, swift and direct, with rapid wing-beats, turning and wheeling in air is performed with grace and ease. All of the species run swiftly, although none when adult swim voluntarily when uninjured, wounded birds, and young often enter the water and swim with ease.

a. Snipe Sandpipers. *Macrorhamphus*.

Medium sized, snipe-like birds with long, sensitive-tipped bills, rather long necks, folded wings reaching tip of square tail, legs, long and feet with partly webbed toes, fig. 87; sometimes occur on muddy borders of fresh waters, but more commonly in muddy places on salt marshes where they feed by probing.

Fig 87.



1. DOWITCHER, *M. GRISEUS*. 10.00; bill, 2.35; dusky brown above so thick-

G, D, a, 1. 1-6.

ly streaked and banded with pale cinnamon as to appear reddish when seen at a distance; lower back and rump, white

spotted with dusky ; beneath, pale cinnamon somewhat mottled with lighter, marked with a number of rounded spots and some bars of dusky ; bill, brown ; feet, greenish, fig. 81. Winter, gray above ; lower back and rump as in summer ; white beneath, grayish on lower neck and sides where there are slight bandings and spottings of dusky. Young, differ from the last in being darker above where all of the feathers, excepting on lower back, rump and upper tail coverts, are edged and banded with yellowish-rufous ; beneath, tinged with reddish-buff. Note, a mellow whistle uttered when the bird rises and when it is on the wing ; this call is often followed by one or two others which are low and querulous. An unsuspicious species which, although sometimes found singly, more often occurs in flocks, some of which are very large, and fly in compact form. Eastern N. A. ; breeding far north ; pass south, chiefly along the coast in July and Aug. ; winters from the Carolinas to the West Indies and Brazil ; come north in May ; abundant at this season in Fla. and the Bahamas but not as common further north.

2. LONG-BILLED DOWITCHER, *M. SCOLOPACEUS*. Differs from 1 in being deeper in color beneath, where there are no blotches. Western N. A. breeding in Alaska to the Arctic coast ; migrating south through western U. S. (including the Mississippi Valley) and less commonly along the Atlantic coast to winter in Mexico ; time of migration same as in 1.

b. Long-legged Sandpipers. *Micropalma*.

Very long legged birds with slightly webbed toes, slender, somewhat sensitive tipped bills which are not as long as in **a**, fig. 88. Similar in general habit to **a** and frequent similar places.

1, STILT SANDPIPER, *M. HIMANTOPUS*. 9.00. bill, 1.60 ; tail, white ; remaining upper parts dusky-brown streaked and banded with pale buff ; patch on side of head, light rusty ; beneath, white, banded with dusky ; bill, brown ; feet, greenish. In winter rather grayer above and dull white beneath without bandings ; no reddish spot on side of head, fig. 88. Young, rather more buffy above than the last and with a buff

tingeing on breast. Note, a chuckling whistle. Flight, swift and direct, with rapid wing beats. Eastern N. A., breeding north of the U. S.; goes south in Aug. when it is not uncommon on the coast of Mass., to winter in S. A.; comes north in April, when it is common in Fla. but rare further north on the coast.

Fig. 88.



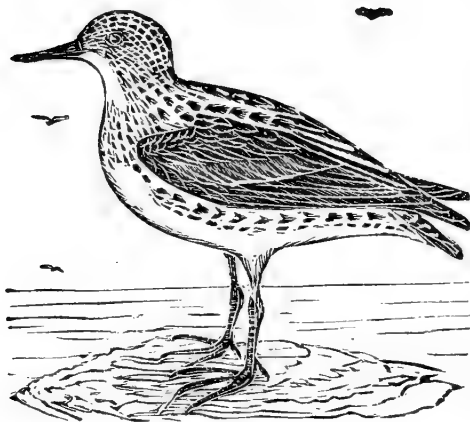
G, D, b, 1. 1-3,

c. Ruddy Sandpipers. *Tringa*.

Rather large, stout sandpipers with quite thick and not very long bills that are not sensitive at tip; legs not long; toes without webs; occur on sandy beaches and procure their

Fig. 89.

food, which consists chiefly of small marine animals, between tide marks.



G, B, c, 1. 1-5.

1. KNOT, *T. CANUTUS*. 10.50; bill, 1.35; ashy-gray above mottled with dull black and pale reddish; upper tail coverts, white banded with dusky; beneath, pale cinnamon streaked on throat and banded on sides with dusky bill, brown; feet, greenish, fig. 89. Winter, gray above

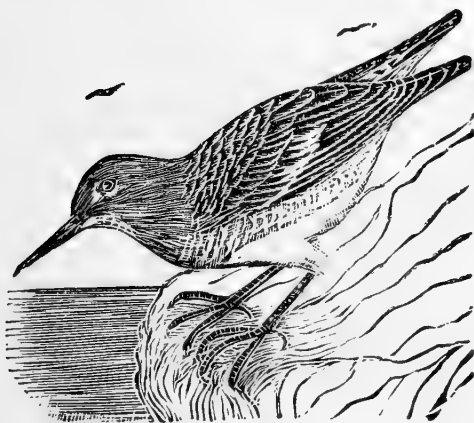
with feathers margined with white and the white beneath is tinged with yellowish. Young, differ from the last in being without the yellowish tingeing beneath. Note, a clear, double whistle, not loud and not often given. Occurs in small flocks often associating with Black-bellied Plover and other beach birds, but frequently alone on sand spits. Northern Hemisphere, breeding far north migrating south in N. A. on the Atlantic coast from the middle of July until the first of Nov.; winters from the Carolinas southward but is not found on the Bahamas and is rare in the West Indies; migrates northward in May, arriving in N. E. the latter part of the month, when it is not uncommon along the south shore and on Cape Cod, but rare north of Cape Ann.

d, Feather-legged Stints. *Arquatella*.

Medium sized sandpipers with robust form, slender, not long bills, short legs with tibia provided with long feathers the tips of which reach below the tarsal joint, and with rounded tail, fig. 90.

1. PURPLE SANDPIPER, *A. MARITIMA*. 8.50; bill, 1.25; brownish-black above with the scapularies and interscapularies irregularly spotted with dull buff and bordered with whitish at tips; white beneath streaked on neck and

Fig. 90.



chest with dusky; breast, light grayish spotted with darker; bill, dark-brown, orange at base; feet, greenish-yellow. Winter, blackish brown above glossed with purplish, scapularies, interscapularies, and wing coverts bordered with plumbeous, fig. 90. Young differ from the last in having the dark of upper parts much obscured with plumbeous and the plumbeous be-

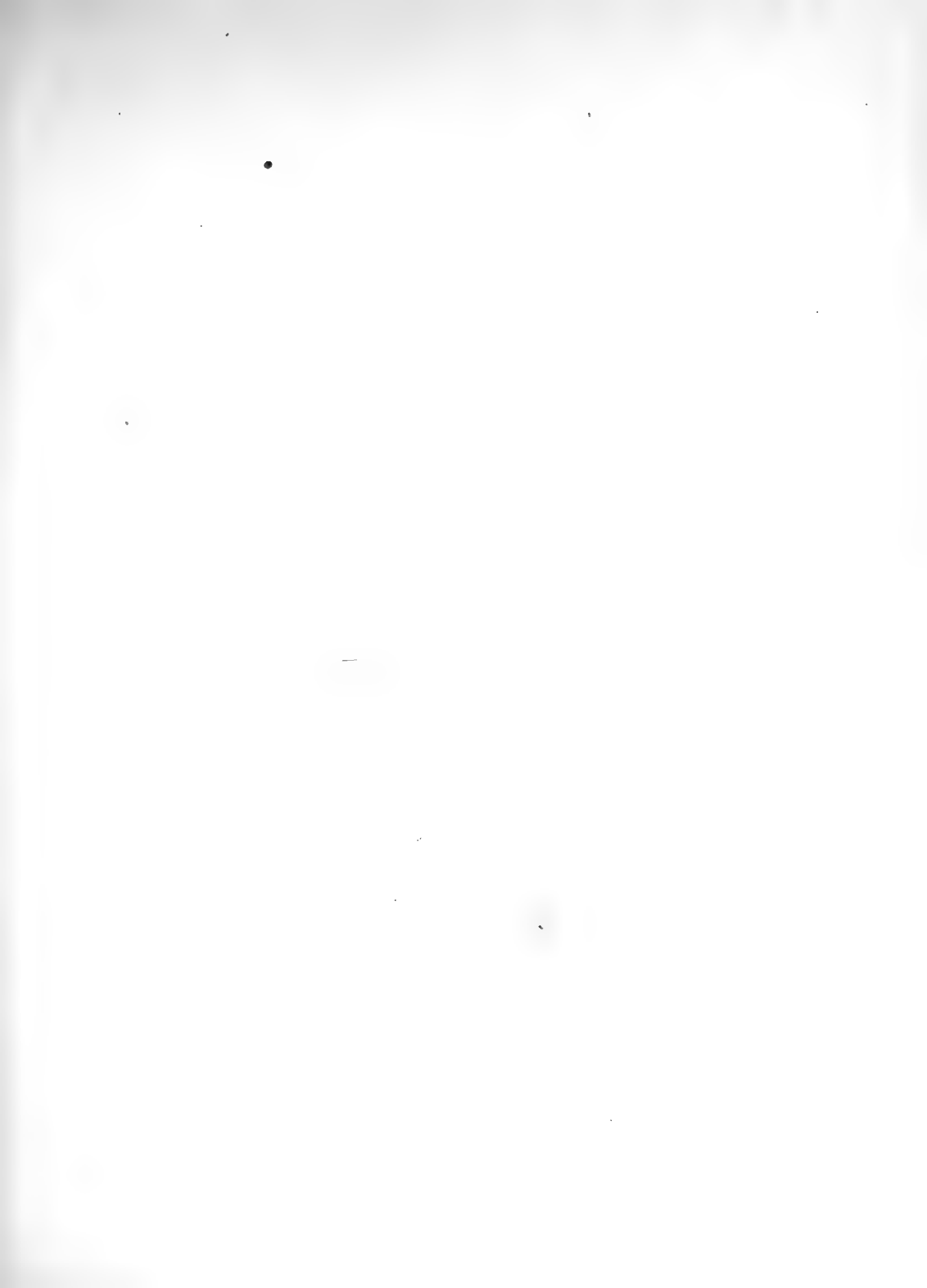
neath is extended on to the neck; rump and upper tail coverts, black in all stages. Note, a feeble whistle. Flight, ordinary. Northern portions of northern hemisphere, breeding far north; in N. A. migrating south in Oct. appearing on the coast of N. E. about Nov. 1; winters from the British Provinces south to the Great Lakes and upper Mississippi Valley, on the Atlantic coast commonly from Grand Manan to the south shore of N. E.; more rarely to N. J. and casually to Fla. Occurs on rocky islands. Common.

e. Stints. *Actodromas*.

Medium to small sized sandpipers differing from *d* in having a more slender form and longer legs which are not feathered so near the tarsal joint; toes, not palmate, plate 7. Upper tail coverts dark brown excepting in 2 and 3.

1. PECTORAL SANDPIPER, *A. MACULATA*. 8.50; bill, 1.15; rump, dark-brown; above, dark-brown with the feathers margined with brownish-buff; white beneath with fore neck and breast grayish-buff broadly streaked with dusky; bill, brown; feet, greenish. Plate 8, *A.* Winter, differs in being less rusty above with the dark markings less distinct. Young, more rusty above than the summer adult and more buff beneath where the streakings are narrower. Note, a shrill, rolling whistle, often given harshly and gratingly. Flight, when started singly, swift and erratic, something as in *C*, *c*, 1. Occurs, as a rule, among the grass of the higher portions of the salt marshes where it has a habit of squatting to hide when approached. Breeds in the Arctic regions of N. A. migrating southward from the middle of July until the first of Nov.; abundant at this season on the coast and rather common in the interior; not common on the Atlantic coast south of N. J.; winters far south in S. A.; comes north in May but is then rare on the Atlantic coast and common in the interior.

2. WHITE-RUMPED SANDPIPER, *A. FUSCICOLLIS*. *A.* little smaller than 1 (7.00); bill, more slender, shorter (.95); uppertail coverts, white; brownish gray above rather broad-





ROSEATE TERN. 1-3.





ly streaked with dusky and tinged with yellowish red; white beneath with sides of head, lower neck, and breast tinged with ashy and streaked with dusky; bill, brown; feet, greenish, fig. 91. Winter, differs in having no reddish above and fewer streaks beneath. Young, differ in having many of the feathers above tipped with rusty and some buff tinging on breast. Note, a short, sharp whistle. Flight ordinary. Occurs on both beach and salt marsh; unsuspicious birds which are sometimes found

Fig. 91.



G, D, 2. 1-4.

in small flocks by themselves, or often in company with other sandpipers. Eastern N. A. breeding far north; migrates south in Sep. and Oct. but sometimes specimens occur earlier or later in N. E.; winters in southern S. A. casually as far north as Fla.

3. COOPER'S SANDPIPER, *A. COOPERI*. Differs from 4 in being larger (9.50), in having only a trace of reddish on the longer scapularies, plate 71, and in having conspicuous V-shaped marks on upper tail coverts. Only a single specimen known, obtained on Long Island, N. Y., May 24, 1833.

4. BAIRD'S SANDPIPER, *A. BAIRDII*. Somewhat similar to 1, differs in being smaller (7.25), in having a weaker bill, (.95), plate 8, B, in being much paler above, and in having fewer streakings on the breast below. The young have all of the feathers above very narrowly margined with pale grayish-buff conspicuous enough to give the back a scaled appearance. Note, not very unlike 1. Flight, much as in

2. Breeds in Alaska and on the Barren Grounds; migrates south in Aug. and Sep., but chiefly through the interior of the western states where it is often found on dry ground; rare on the Atlantic Coast from N. E. south, occurring with other sandpipers on both marsh and beach; winters in southern S. A.; comes north in April always through the interior.

5. LEAST SANDPIPER, *A. MINUTILLA*. Smallest of all our sandpipers (6.15; bill .85), in spring much like a small edition of 1 but with less buff beneath and fewer streakings, plate 7. Winter, grayish above; indistinctly streaked with dusky and grayish on breast. Young, with the dark brown feathers above very conspicuously bordered with bright rufous and a few spots of whitish; breast, buff; bill, always brown and feet greenish yellow. Ordinary call a trilling whistle, also give a low piping note when feeding; Dr. C. W. Townsend in his incomparable Birds of Essex County, Mass. says; " In Spring I have frequently seen them fly over the marsh with wings quivering forcibly downward, uttering constantly sweet tremulo calls, — the flight song of the species. " In flight flocks often oscillate from side to side showing first the dark backs then the white under parts. The most abundant of our sandpipers, occurring more often on marshes and mud flats than on the beaches, sometimes singly but more frequently in flocks of from three or four to hundreds, the larger numbers being usually found in the south in winter; usually unsuspicious, allowing near approach. Breeds north of the U. S., passes south in July and Aug., often occurring in the interior but chiefly along the coast; winters from the Carolinas southward into S. A. but not common in the U. S. at this season; comes north in May.

f. Dunlin Sandpipers. *Pelidna*.

Medium sized Sandpipers with long, decidedly curved bills, plate 9, A; otherwise much as in e.

1. RED-BACKED SANDPIPER, *P. SAKHALINA*. 8.35; bill, 1.50. Above red distinctly spotted with black; wings

gray; beneath, white streaked with dusky, belly covered with a nearly continuous patch of black. Winter, ashy-gray above; white beneath with breast tinged with ashy and narrowly streaked with dusky, plate 9, A. Young, differ from the last in having the feathers of upper parts, especially of the wings, margined with rufous; upper tail coverts, bill, and feet always black. A very unsuspicious species that occurs more often on sandy beaches than elsewhere, sometimes singly but more often in flocks or in company with other shore birds. Call, a rather plaintive, melodious note sounding something like "*Purrc*"; when disturbed utters a short chuckling cry; flight, ordinary. N.A.; breeding far north; goes south in Sep., Oct., and Nov.; winters from the Carolinas southward, occasionally remaining further north; comes north in May. Abundant on the coasts in fall; rather uncommon in spring along the Atlantic coast north of the Carolinas.

2. DUNLIN, P. ALPINA. Differs from 1 in being smaller (7.50; bill, 1.25) and in having less red above, the black predominating, but is more heavily streaked below with dusky; thus the black of the belly is not in as strong contrast with the lighter parts. Northern parts of the Old World; accidental in Eastern N. A.; one record for Mass.

g. Curve-billed Sandpipers. *Erolia*.

Medium sized sandpipers with long, slender, curved, bills, fig. 92, long slender legs and short, nearly square tails.

1. CURLEW SANDPIPER, E. FERRUGINEA. 8.00; bill 1.50; upper tail coverts, white; lower parts, reddish chestnut; upper parts, varied with blackish and rusty. Winter and young much as in f, 1, excepting that the upper tail coverts are white. Old World, occasional in eastern N. A. and Alaska; there are a number of N. E. records.

Fig. 92.



G, D. g, 1.

h. Semipalmated Sandpipers. *Ereunetes*.

Differs from *e* chiefly in having a proportionately stouter bill and webs between the anterior toes; plate 10.

1. SEMIPALMATED SANDPIPER, *E. pusillus*. Differs from *e*, 5 in being larger (6.75 ; bill, .75); grayer above with only a slight tingeing of reddish on sides of head and scapularies and no buff below; in winter there is no buff anywhere and but little above in the young; bill and feet, always black, plate 10. An abundant species both spring and fall all along our coast, but rather shy in frequented locations, yet quite unsuspicious when not molested; frequents sandy beaches rather than mud flats and mud holes in the marshes, although it is sometimes found in those places. Ordinary call note not unlike that of *e*, 5 but rather more shrill. I cannot refrain from quoting Dr. Townsend's charming description of the spring notes as he heard them at Ipswich, Mass. He says; " A harsh rasping note and a peeping note are sometimes heard. A low, rolling, gossipy note is often emitted when they approach other birds. This latter note is often imitated with success by gunners. In spring, however, the bird is delightfully musical on occasions, and his flight song may be heard on the beach and among the bogs of the dunes. Rising on quivering wings to about thirty feet from the ground, the bird advances with rapid wingbeats, curving the pinions strongly downward, pouring forth a succession of musical notes, a continuous quavering trill, and ending with a very few sweet notes that recall those of a Goldfinch. He then descends to the ground where one may be lucky enough, if near at hand, to hear a low musical "*cluck*" from the excited bird. This is, I suppose, the full love song, and is not often heard in its entirety, but the first quavering trill is not uncommon, a single bird, or a member of a flock singing thus as he flies over. I have seen birds chasing one another on the beach with raised wings, emitting a few quavering notes, and have been reminded of a Long-billed Marsh Wren. " (Birds of Essex County, p. 178).

Eastern N. A. , breeding north of the U. S. ; migrates south from the middle of July until the first of Nov. ; winters from the Carolinas through the Bahamas and West Indies to S. A. ; comes north in May. Stragglers of this species, of e. 5 and of f, 1 are sometimes found all summer as far south as Mass.

1. WESTERN SANDPIPER, *E. OCCIDENTALIS*. Differs from 1 in having the upper parts prominently marked with bright cinnamon and the breast with distinct streaks and triangular spots of dusky, the sides with arrow-shaped marks of the same; bill, stouter and longer, about 1.00, plate 9, B. Breeds far north in western N. A., migrates south about the same time as 1 and winters in the same section; common in Fla. in winter and spring but rather uncommon further north; a few occur along the coast in autumn as far north as N. E. ; not found as far north as this in spring.

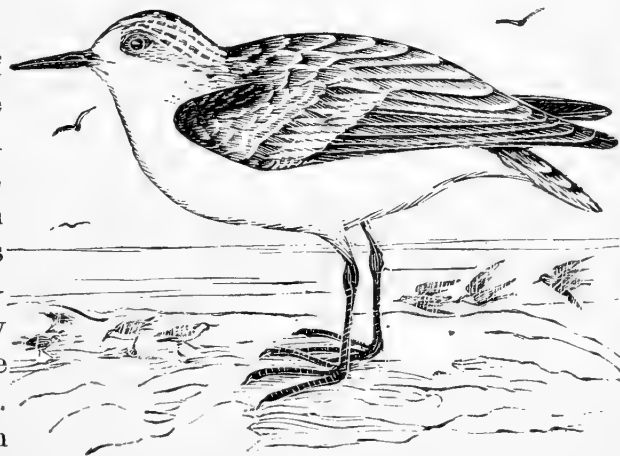
i. Three-toed Sandpipers. *Calidris*.

Medium sized sandpipers with robust forms, rather short. stout bills, short legs. and feet with three short toes, without basal webs, the posterior being absent, fig. 93.

1. SANDERLING, *C. ARENARIA*. 7.50; bill, 1.00; light rusty, palest on head, neck and chest where it is spotted with blackish on back;

Eig. 93.

bill and undertail coverts, white; spot on bend of wing and of fore arm, blackish and there is a white patch on wing conspicuous in flight; winter; pale gray above; pure white beneath, fig. 93. Young, differ from last in being mot-



G, D, i, 2. 1-8

tled with black above and with dusky beneath; bill and feet, always black. Breeds in the arctic and subarctic regions of both hemispheres; migrates south in N. A. from the middle of July until the middle of Nov., when it is abundant on sandy beaches all along the coast, occurring singly, in flocks of varying sizes, or in company with other beach birds, unsuspicious at this season; winters from the Carolinas south to Patagonia; goes north in May.

j. Tatlers. Totanus.

Slender-bodied birds with large heads, long, slender black bills, with rather wide gape; long greenish or yellow legs, long toes with small basal webs; and long wings, folding beyond tip of slightly rounded tail; upper tail coverts, white sometimes barred with dusky, Fig. 94.

1. GREATER YELLOW-LEGS, *T. MELANOLEUCUS*. Largest of our species, 14.00; bill, 2.25; blackish-gray above streaked and spotted with yellowish white; white beneath, streaked on lower neck and breast with dusky and banded on sides, axillaries, and under wing coverts with the same. Occurs on marshes and mud flats where it makes itself conspicuous by its loud, clear whistle which is given very frequently; also occurs in fresh waters; flight steady with long wing beats, varied with intervals of sailing; in alighting the bird sails, then suddenly alights by dropping its long legs; when down it often raises its wings perpendicularly over its back, as do some other of the shore birds; besides the call note it gives a kind of scream in spring something like that emitted by the Common Tern and a rolling, or scolding note. Common on the coast and not infrequent in the interior near water. Breeds in northern N. A.; migrates south from July 15 to Nov. 15; winters from the Carolinas southward nearly all over S. A.; comes north in April and May.

2. LESSER YELLOW-LEGS, *T. FLAVIPES*. Generally similar to 1; differs in being much smaller (10.25; bill, 1.45), in having the head always ashy and with more indis-

tinct dusky markings below, fig. 94. Call, not very different from 1. but less prolonged and with less volume; habits also similar but this species is always unsuspicious. Breeds far north in N. A.; migrates south from July 1 to Sep. 15 when it is common along the coast and not infrequent in the interior; winters in southern S. A., rare in Fla. at this season (Lake Jessup, Feb. 20, 1901, five specimens); migrates north in April and May, rare at this season on the Atlantic coast, abundant in the Mississippi Valley.

Fig. 94.



3. GREENSHANKS. *T. NEBULARIUS*. Differs from 1 in having the lower back and rump pure white without markings. Eastern hemisphere, breeding far north; accidental in Florida. (near Cape Sable, Audubon).

G, D, f, 2. 1-5

k. Fresh-water Tatlers. *Helodromas*.

Differs from j in having the bill more slender and never upcurved, dark legs, shorter wings not folding beyond tip of tail, and dark upper tail coverts, fig. 95.

Fig. 95.



upcurved, dark legs, shorter wings not folding beyond tip of tail, and dark upper tail coverts, fig. 95.

1. SOLITARY SANDPIPER, *H. solitarius*. 8.50; bill, 1.25; dark greenish slate above finely marked with white; tail, broadly banded with white (excepting middle feathers which are spotted on sides with white);

G, D, k, 1. 1-4

ing middle feathers which are spotted on sides with white);

white beneath, distinctly streaked on lower neck, breast, sides, and beneath wings, with dusky; bill, greenish black; feet, dark greenish. Winter, more ashy above and less distinctly marked with white above and dusky below. Young, lighter slate above marked with buffy white; throat and breast very indistinctly marked with ashy-buff. Common, usually occurring singly about pools or small ponds of fresh water, but sometimes two or three are found together; unsuspicious. Teters somewhat when sitting but not as much as in **p** 1. Note, a rather loud whistling "*peet*" repeated four or five times when the bird is on the wing. Flight, rather rapid, not very direct; wings kept high and their beats are strong. Breeds occasionally in northern U. S. but more commonly further north; migrates south in Aug., Sep., and Oct.; winters in the extreme southern states, the West Indies and northern S. A.; comes north in April (Bahamas, rare) and May.

2. GREEN SANDPIPER, *T. ochropus*. Differs from 1 in being a little larger (10.00; bill 1.35), and in having the middle tail feathers broadly banded with white, and the upper tail coverts pure white. Places its eggs in the abandoned nest of some tree-building bird. Northern parts of the Old World; accidental in Eastern N. A.

1. Semipalmated Tatlers. *Symphemia*.

Differ from **j** in being stouter with shorter, thicker bills, dark legs, toes well webbed basally, white unbanded upper tail coverts, and white marked wings. Size, large, fig. 96.

1. WILLET, *S. semipalmata*. 14.00; bill, 2.25; above, brownish buff, varied with dark brown; large white patch on wing; axillaries and wing lining, dull black, both of these latter characteristics prominent in flight; white beneath, pale buff on breast and sides and here streaked and banded with dusky; bill, brown; feet, plumbeous, fig. 96. Winter, differs in having no dark markings above or below. Young, have the feathers above margined with yellowish and the sides are tinged with it and finely mottled with grayish.

Downy young, brownish-gray above, irregularly and coarsely marbled with dusky, dull white beneath; four or more

Fig. 96.



G, D, l. 1. 1-4.

dusky lines on sides of head. A noisy bird constantly crying “ *Pillie willie willet* ” in loud, shrill, tones; also gives a loud, rasping cry, and a chuckling note when alighting. Social, usually occurring in flocks of three or four to a dozen or more; feeds on mud flats but sometimes occurs on sandy beaches; sometimes perches on dead limbs of trees; flight quite slow but direct; wing beats strong and well down, not rapid. Breeds from N. J. south to Fla. and irregularly north to N. E.; resident and all winter from the Carolinas southward. Uncommon on the coast of Mass. in fall and rare in spring.

m. Fighting Sandpipers. Pavoncella.

Large stout sandpipers the males of which are remarkable in having a cape of elongated feathers about the neck and a ruff on the back of the upper neck; face naked and covered with papillae. Noted for their pugnacity, fig. 97.

1. RUFF, *P. PUGNAX*. 11.00; bill, 1.25; colors, very variable, above varied with black, buff, and gray; ruff and cape either chestnut, buff, black, or whitish, streaked, plain or barred; beneath, white; sides of rump white, fig. 97. Female, without ruff and cape; plumage barred with blackish, white and rusty, face feathered. Young, brownish-black above with the feathers bordered on back with buff and streaked on head with reddish; white beneath, becoming buffy anteriorly. More northern parts of eastern hemisphere; occasional in eastern U. S., but chiefly on the coast.

Fig. 97.



n. Highland Sandpipers.
Bartramia.

Rather large sandpipers that live on the uplands, with short, slender bills with a very wide gape, enabling the birds to swallow locusts and other insects upon which they feed; neck, long and thin; tail, very long; outer toes slightly webbed, inner not at all, other characters much as in e, fig. 98.

G, D, m, 1. 1-5.

1. BARTRAMIAN SANDPIPER, *B. LONGICAUDA*. 12.00; bill, 1.10. Brownish-buff above, varied with reddish and spotted and barred with blackish; tail, buff, tipped with white and somewhat banded with spots of black; beneath buffy-white banded on under wing coverts and axillaries and spotted with arrow shaped marks on neck, breast and sides with dusky-brown, fig. 98. Young, differ in being more yellowish above and the secondaries and inner primaries are tipped with white. Downy young, grayish-white, tinged with rusty coarsely and irregularly mottled with dusky; beneath, buffy-white, spots on flanks and on sides of

head, black, Breeds through eastern and central N. A. from Penn. north to Quebec in suitable places.

Fig. 98.

The call note is very musical and bubbling and is almost invariably given as the bird flies. I not infrequently hear it here in Newton as the bird flies over my house during migrations, sometimes in the night; if disturbed when breeding



G, D, n, 1. 1-6.

it utters harsher cries; and when alighting emits a chuckling sound. Frequents the hill tops near the coast especially in the autumn, but sometimes occurs on the marshes both in N. E. and further south; goes south in Sep. to winter in northern S. A.; comes north in April and May.

o. Buffy Sandpipers. Tryngites.

Rather small, slender sandpipers with shorter tails than in n, and with bill more slender, otherwise quite similar.

1. BUFF-BREASTED SANDPIPER, T. SUBRUFICOLLIS.

Fig. 99.



G, D, o, 1. 1-3.

8.00; bill, .80; grayish-buff above mixed with blackish; buff beneath somewhat spotted on breast with dusky; axillaries, white, showing in flight; lining of wing and inner webs of primaries, white, marbled with dusky. Young, differ in having the feathers bordered with whitish. Breeds in the far north-

ern interior of N. A. where it is abundant; migrates south in Aug. but on its way south appears to be nowhere common; once not very uncommon on the hills on or near the coast of N. E. but now seldom seen there. Flight, rapid but rather flitting. Call note, a clear whistle, given as the bird flies. Winters in S. A.; comes north in May when very seldom, if ever, found on the Atlantic coast.

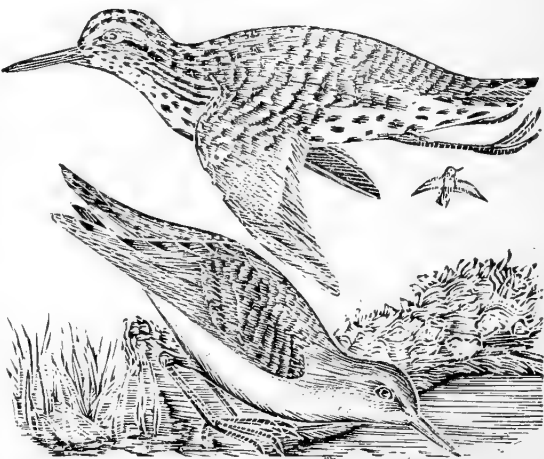
p. Tilting Sandpipers. *Actitis*.

Small, rather short-beaked, short-legged sandpipers with outer toes conspicuously webbed, and which tilt frequently when moving on the ground, fig. 100.

1. SPOTTED SANDPIPER. *A. MACULARIS*, 7.50; bill, .95; white beneath marked with rounded spots of dusky; broad band through under side of wing, conspicuous in flight, white; above, ashy-brown, glossed with greenish, banded, streaked, and spotted with dusky; bill, yellowish-brown; feet, yellow; tail, tipped with white and outer feathers banded with same, fig. 100. Winter, differs in being without dusky markings above (excepting on wing coverts), and below. Young, differ from last in having buff bandings on wings and tail. Downy young, yellowish-gray above with a narrow black line down back and one on either side of head; white beneath. Breeds throughout temperate N. A. nesting both on the

Fig. 100.

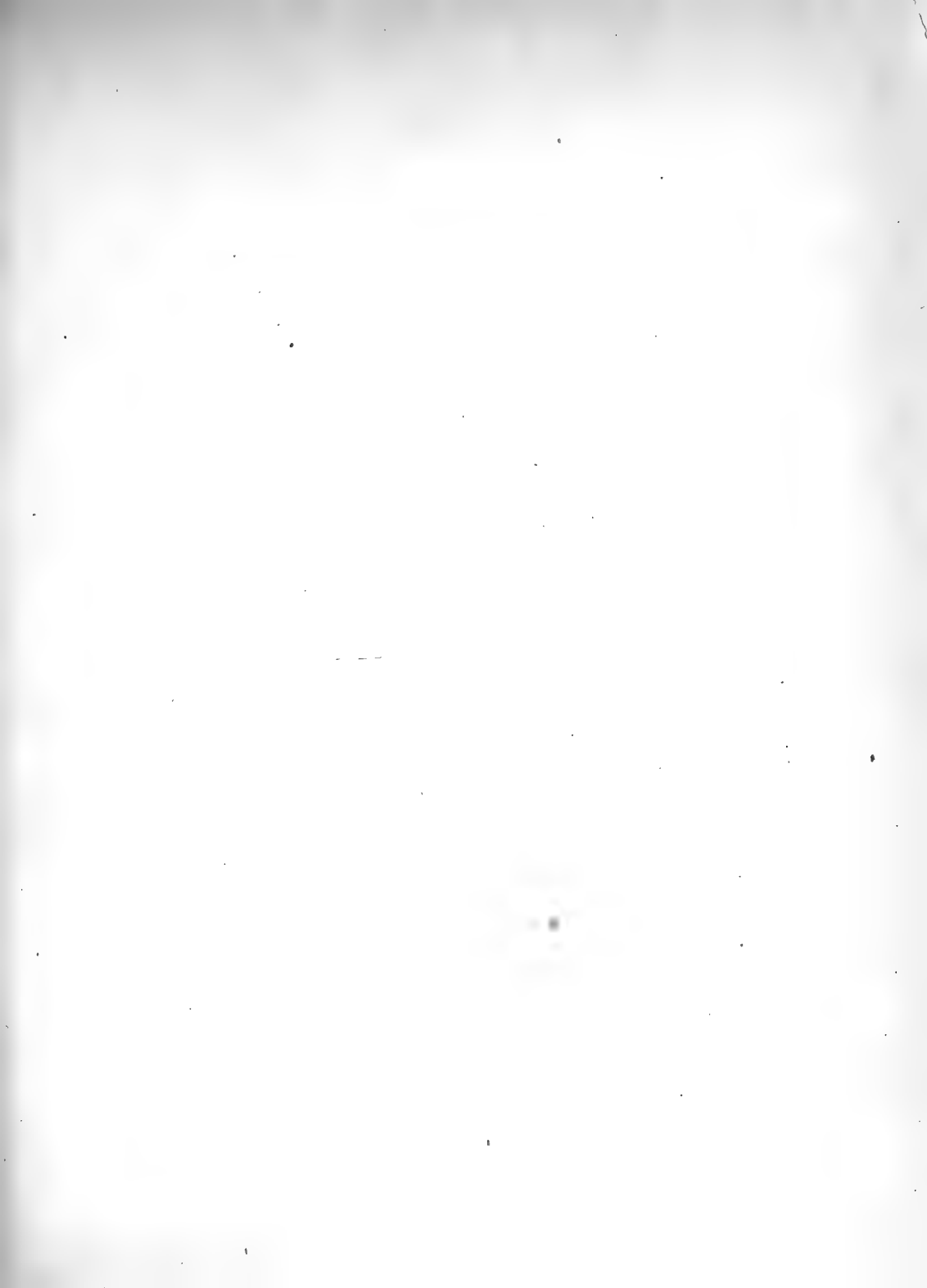
coast and in the interior; common. Flight direct, but slow, wing beats short and jerky, the wing tips being held below the level of the body; in passing over water it is apt to fly close to the surface. Call note, "*Peet weet weet weet*", rather shrill, but quite musical. Rather solitary, or at best found in

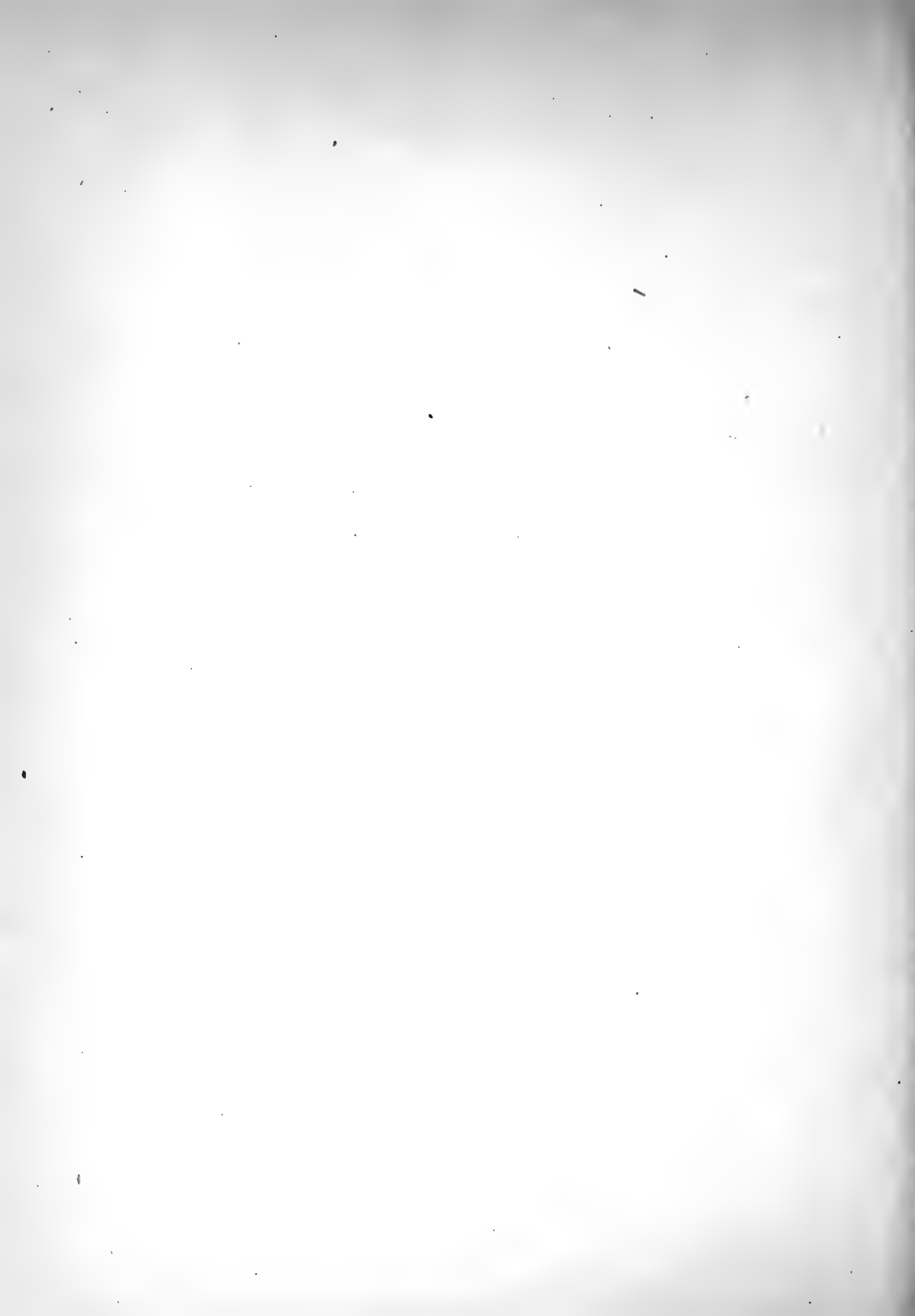


G, D, p, 1. 1-4.

LEAST SANDPIPER.







small companies in autumn, but never flying in compact flocks. Goes south in late Oct. but some remain into Nov. as far north as Mass.; winters sparingly from the Carolinas to Fla.; common from this point and on the Bahamas, southward to southern Brazil; comes north in late April.

q. Godwits. *Limosa*.

Large, sandpiper-like birds with very long, somewhat recurved bills, long pointed wings which fold beyond the end of the short, square tail; legs, long; toes, somewhat webbed, fig. 101

1. MARBLED GODWIT, *L. FEOA*. 18.50; bill, 4.00; pale cinnamon throughout; streaked on head and neck and irregularly barred and spotted elsewhere (excepting on throat and abdomen)

Fig. 101.

with dusky-brown, fig.

101. Young, differ in

being more reddish

and in having no

markings beneath.

Breeds in the interior

from Iowa and Nebras-

ka, northward to Man-

itoba and the Sas-

katchewan, when

it occurs on the dry

prairies; migrates

south in Aug. and Sep.

accidental or rare

then on the Atlantic

coast from Mass. to the Carolinas; formerly wintered com-

monly in nothern and middle Fla. on both coasts, now rarely

if ever found there, but occurs in Guatemala and Yucatan.

In spring it gives a series of shivering notes; in winter, when

alarmed, utters harsh and discordant cries. Occurs on the

borders of pools, both salt and fresh, and on mud flats in

flocks from a few individuals to hundreds, as in Fla. up to



G, D, q, 1. 1-6.

1877 and probably somewhat later, sometimes associates with other shore birds; comes north in April.

Fig. 102.

2. HUDSONIAN GODWIT, *L. HAEMATICA*. 15.00; bill, 3.00; upper tail coverts, always pure white; and tail, black. Head and neck, pale chestnut, streaked with dusky; beneath brighter chestnut, barred with dusky; back, blackish, marked with



G, D, q, 2. 1-6.

buff. Winter, back brownish-gray; head, neck, and beneath grayish-white, grayish anteriorly. Young, differ from last in being buffy throughout. Breeds in eastern N. A. but far north; migrates south in Aug. and Sep. when it is rare on the coast of N. E.; not common anywhere; winters in extreme southern S. A.; comes north in April and May. Frequents mud flats and sloughs. Note, low and double.

3. BLACK-TAILED GODWIT, *L. LIMOSA*. Differs from 1 in having two white wing patches, one at base of primaries and one occupying most of the secondaries, both conspicuous in flight. Northern portions of eastern hemisphere, accidental in Greenland.

r. Curlews. Numenius.

Large, rather stout birds with long, strongly curved bills, long wings, folding beyond tip of square tail, short, stout legs, and toes with basal membranes. Color, pale or reddish-buff more or less marked with dusky; figs. 103 to 105.

1. LONG-BILLED CURLEW, *N. LONGIROSTRIS*. Largest of our Curlews, 24.00; bill, 3.00 to 8.00; pale cinnamon, decided reddish below and on axillaries, marked above with

blackish and streaked below on neck, breast, and sides with

Fig. 103.



G, D, r, 1. 1-8.

the same; bill, brown, yellow at base of lower mandible; feet, brown; no buffy central or supercilliary stripes on head; axillaries, unbanded, fig. 103. Downy Young, buffy yellow, darker above tinged with sulphur yellow beneath, coarsely and irregularly marbled above with black; bill, straight. Breeds through the interior of temperate N. A. north into the British Provinces; at this season frequents alike dry prairies and moist situations; migrates southward in Sep., when formerly was not uncommon on the coast of N. E.; now probably never occurs there; winters largely in Guatemala; formerly, up to 1877 and somewhat later, was abundant at this season from the Carolinas to middle Fla., now none occur in this section, nor is it probable that it is very common anywhere; comes north in April. Note, a shrill whistle sounding almost like a scream, also utters a mellow, undulating whistle as it flies. Flight, slow with long rather sweeping wing-beats.

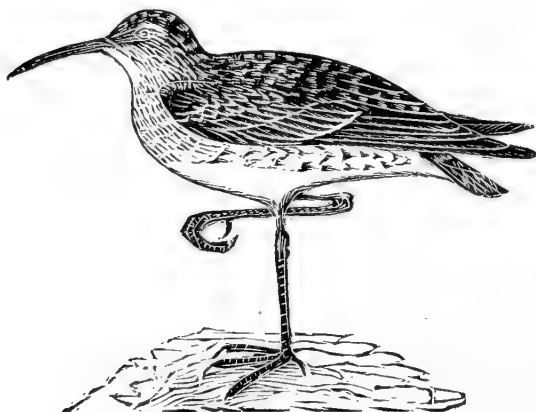
2. HUDSONIAN CURLEW, *N. HUDSONICUS*. Differs from 1 in being smaller, 17.00; bill, 3.50; in being paler, in having a distinct central line of buff on head and a superciliary line of the same, and the axillaries banded with dusky; inner webs of primaries, spotted with red-dish on their edges, fig. 104. Breeds far north in N. A. migrating south in Aug. at which time it is not uncommon on the coast of



Mass. and southward, sometimes remaining until the middle of Sep.; winters south of the U. S. occurring at that season all over S. A., Call note, a clear, rather shrill whistle. Flight not unlike that of 1.

G, D, r, 2. 1-8.

3. ESQUIMO CURLEW, *N. BOREALIS*. Smallest of our Curlews, 13.50; bill, 2.25; differs from 2 in color, in the absence of the central line of buff on crown, in having the markings on the sides arrow shaped, and in having the inner webs of primaries without light spottings, fig. 105. Breeds far north in eastern N. A. migrating south



G, D, r, 3. 1-8.

in Aug. when was abundant on the coasts of the British Provinces and rare further south; formerly abundant on the N. E. coast at this season, but has been gradually diminishing since the early 70's and is now very rare; winters in southern S. A.; comes north in April, when it avoids the Atlantic coast and is abundant in the Mississippi Valley and westward on the Plains. Note, a soft, mellow whistle, given as the bird flies. Moves in large, close flocks, sweeping about much as sandpipers do; flight, swift; wing beats regular and not rapid. This species now appears to be very rare everywhere even north of N. E. and in the Mississippi Valley in spring.

4. WHIMBREL, *N. PHAEOPUS*. Much like 2, but the rump is plain white, and the axillaries are white banded with grayish-brown. Northern parts of Old World; occasional in Greenland.

C. PLOVER. *Charadriidae*.

Differ from **B** in being stouter in form, in having a shorter, harder, bill, and in having the tarsus in front covered with small hexagonal or irregular scales. Excepting in **a** and **b** the hind toe is absent, figs. 106 to 110.

a. *Vanellus*. Crested Plover.

Head, crested; upper plumage with metallic luster; hind toe, present. Plover-like birds found mostly in the Old World.

1. LAPWING, *V. VANELLUS*. 13.00; bill, 1.00; top and fore part of head, chin, throat and breast, blue-black; back, metallic green, bluish and purple; upper tail coverts, rufous; tail, black with basal half and tip, sides of head, neck and belly, white; lower tail coverts, rufous. Winter, differs in having the chin and throat white and the sides and head tinged with buff. Active, noisy birds. Northern parts of the eastern hemisphere; occasional in Greenland and on Long Island.

b. Four-toed Plover. *Squatarola*.

Large plover with large heads, rather long bills, long

legs; a short hind toe and with the three anterior provided with a basal membrane; summer adults light above, black beneath; axillaries, always black, fig. 106.

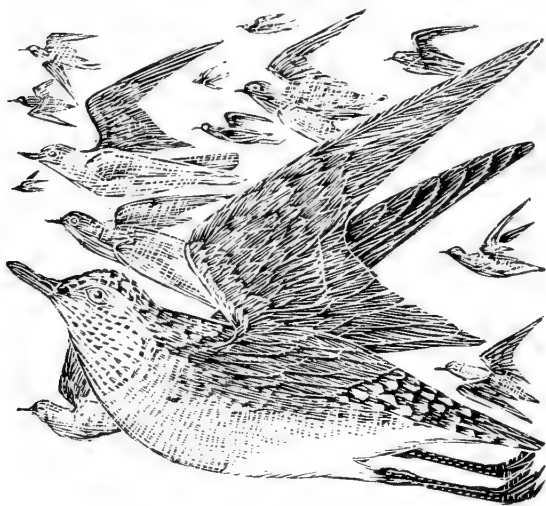
1. BLACK-BELLIED PLOVER, *S.*

SQUATAROLA. 1.00;

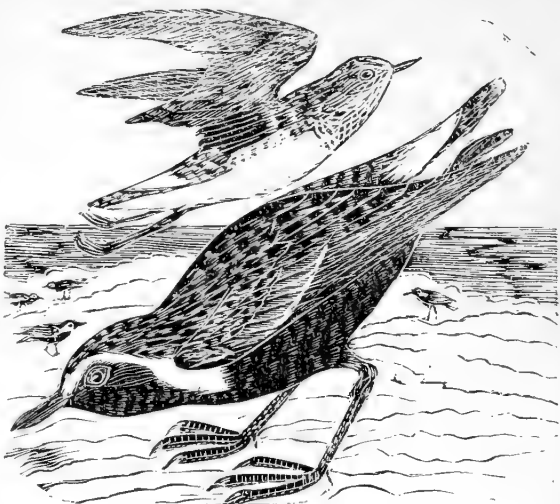
bill, 1.25; lower parts and sides of head, black; forehead, sides of the breast, upper and under tail coverts, white: upper parts, irregularly

spotted with dusky and whitish; bill and feet, black, fig. 106. Young, grayish above, most of the feathers edged with whitish; white beneath, tinged and mottled with grayish

Fig. 107.



G, E, c, 1, 1-8.



G, E, b, 1. 1-8.

on breast. Young, differ from last in having the back spotted with pale yellow; basal half of inner portion of inner webs of primaries, white, contrasting in flight with the black axillaries. Breeds in the northern portion of the northern hemisphere; migrating southward in N. A.

from the middle of July to Nov. 1; winters from the Carolinas and Bahamas south through the West Indies to Brazil and Colombia; comes north in May; common on the coast but rather rare in the interior. Frequents beaches but is sometimes seen on the mud flats. Note, a wild, sweet double whistle, also gives a chuckling note when alighting. Flight, swift and strong with rapid wing beats. Occurs singly or in small flocks.

c. Golden Plovers. Charadrius.

Smaller than in **b**; bill more slender; legs as long as in **b**, but more slender; hind toe, absent; axillaries, never black, otherwise much as in **b**, fig. 107.

1. GOLDEN PLOVER, *C. DOMINICUS*. 10.50; bill, .85; sides of head, chin, and throat, and lower parts, dull black; above, dusky spotted with bright ochre yellow; forehead, line over eye, sides of neck, and breast, pure white; axillaries gray; bill and feet, black. Winter, differs in being grayish below obscurely marked with bands of spots across breast, fig. 107. Young, similar to last but more yellowish on breast. Breeds in Arctic America; migrates south in Aug. and Sep. at which time it is common on the coast of the British Provinces and rare in N. E., where up to the early seventies it was common, frequenting the hills along the shore, now the greater number fly directly south from Newfoundland to the West Indies, on the way to their winter quarters in southern S. A.; comes north in May passing through the interior and is then common in the Mississippi Valley and on the plains west of it. Note, a single mellow whistle. Flight, about as in **b**, 1.

2. GOLDEN PLOVER, *C. APRICARIUS*. Differs from 1 in having the axillaries and under wing coverts white. Breeds in northern Europe and eastern Greenland.

c. Double-ringed Plovers. Oxyechus.

Medium sized, slender plovers with very long, rounded tails and moderately long bills; wings folding well within the tip of tail; a well defined ring crosses breast and another broader one surrounds neck, fig. 108.

1. KILLDEER PLOVER, *O. vocifera*. 10.00; bill .75;
 ashy-brown above;
 upper back, rump, and
 uppertail coverts, pale
 cinnamon; tail, pale
 cinnamon, ashy centrally, tipped with
 white and cinnamon
 which is preceded by
 a black band; tips of
 secondaries, small
 patch on primaries,
 edge of inner webs of
 primaries and second-
 aries, lunette on forehead, spot over eye, and under parts,
 white; narrow line over lunette, broad line on side of head,
 and rings, black, fig. 108. Young, with slight indications of
 reddish on edge of feathers above; bill, black; feet, yellow;
 eyelids, red, in all stages. Downy young, ashy above, mixed
 with rufous; black on head much as in the adult, but the
 bands meet behind; white beneath with a single black band
 surrounding neck. A noisy bird, constantly crying "Kill-
 dee" in loud and shrill tones as it flies. Flight, rapid, not
 direct for the bird twists and turns, wing beats, quick but
 long and decided. Frequents moist places, either on the
 coast or in the interior, sometimes on sea beaches or on bod-
 ies of fresh water. Often squats to hide when approached,
 then rises suddenly with loud cries. Somewhat nocturnal,
 flying readily by night. Breeds throughout temperate N. A.
 but is not common in N. E. at any time. Goes south in Oct.
 and Nov. to winter from the Carolinas southward to north-
 ern S. A.; not common in the Bahamas and Greater Antil-
 les; comes north in March and April.

Fig. 108.



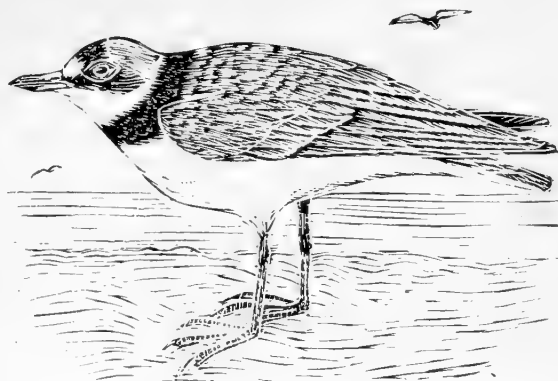
G. E., c, 1. 1-3.

d. Single-ringed Plover. *Aegialitis*.
 Small sized, rather stout plovers with short bills, short,
 slightly rounded tails, wings folding at tip, and short legs;
 with single ring on neck; sexes, similar, fig. 109.

1. SEMIPALMATED PLOVER, A. SEMIPALMATA.

Fig. 109.

7.00; bill, .50; ring completely encircling neck; grayish-brown above, but paler than in c, 1; lunette on forehead, outer tail feathers and tips of all but central pair and beneath, white; wide band on top of head, extending around eye on to ear coverts and over forehead (thus



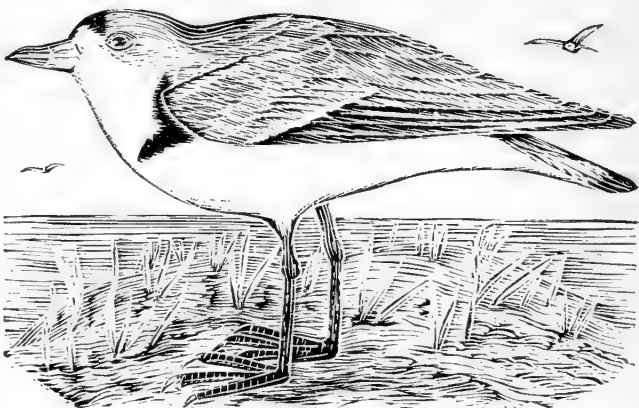
G, E, d, 1. 1-3.

including white lunette), neck ring, spot on middle sub-terminal portion of tail, black; bill, yellow-orange at base: feet, yellow, fig. 109. Winter, black markings replaced by brownish. Young, differs from last in having the feathers of back margined with light buff. Downy young, grayish-brown above mottled with black; lunette, collar on back of neck, and beneath, white. Breeds in arctic and subarctic America, migrating south from the middle of July until the middle of Oct. when it is abundant along the coast and not uncommon in suitable places in the interior; winters from southern Fla. and the Bahamas south through the West Indies to Brazil; comes north in April and May when it is less common on the Atlantic Coast. A common beach bird and also found in sloughs and on mud flats; very social, associating in flocks of varying sizes; upon the ground scatters much, running about in all directions, keeping the head well up; these two latter named habits characterize all Plovers; flight, swift and direct, with rather long wing beats. Call note a rather plaintive double whistle, also gives a single prolonged note when sitting.

2. RING PLOVER, *A. HISTICULA*. Differs from 1 in having the ring much broader. Breeds in the northern parts of the Old World and in North America on the west shore of Cumberland Gulf.

3. PIPING PLOVER, *A. MELODA*. Palest of our Plover. Fig. 110.

About the size of 1; differs in being much paler above, in having no black on sides of head and that on top reduced to a small, inverted lunette, the neck ring is represented by two spots on either



G, E, d, 3. 1-3.

side of breast but does not often extend wholly across breast; there is an oblique patch on primaries and the base of tail is white, fig. 110. Downy young, above, yellowish ash mixed with rufous; white beneath. Breeds from the coast of Virginia to Newfoundland in June; migrates south in Aug. and Sep.; winters on the Florida Keys and Greater Antilles; migrates north from middle April (when it is rare on the Bahamas) through May. Common, but rare now on the coast of Mass. in summer. Note, a long, sweet, mournful whistle. Often associates with 1 and has similar habits.

3*. BELTED PIPING PLOVER, *A. M. CIRCUMCINTA*. Differs from 3 in having the band across breast continuous. Mississippi Valley, breeding from northern Ill. north to Lake Winnipeg, more or less frequent, but chiefly during migration, eastward to the Atlantic coast.

e. Large-billed Plovers. *Ochthodromus*.

Differ from d in having a much larger, longer bill, longer legs, and in the sexes not being similar, plate 11 A.

1. WILSON'S PLOVER, *C. WILSONIUS*. 8.00; bill, .90; male, forehead, superciliary stripe, and beneath, white; fore part of crown, streak from bill to eye and continuous band on breast, black; light ashy-brown above; wings and tail, much as in d, 3. Female, differs in having the black replaced by brownish-gray with more or less light rusty on breast ring. Young, differs from female in having the feathers above bordered with lighter. Downy young, pale grayish buff above spotted with black, forehead, sides of head, collar on hind neck, hand of wing, and beneath, white; spot behind eye, black, plate 11, B. Breeds from Long Island southward through the Bahamas and West Indies, and along the Gulf Coast in May; migrates south in Sep.; winters from the Fla. Keys and the Bahamas south through the West Indies to S. A.; casual as far north as Nova Scotia in summer. Associate together in small flocks or with other small plovers and shore birds. Flight, rather heavy. Call note, a single short but loud whistle; during the breeding season a rattling cry is given. Very common.

f. Ringless Plovers. *Podasocys*.

Larger than e; bill, a little shorter and much more slender; legs, much longer; no black band on breast; sexes similar.

1. MOUNTAIN PLOVER, *P. MONTANA*. 8.50; bill, .85; similar in general color to e, 1, but the black on breast is replaced by a more or less continuous tingeing of slaty-brown; in winter the black markings of head are replaced by slaty-brown. Breeds on the Western Plains from Kansas northward to the British boundary in May; occurs on dry plains and feeds largely on insects; migrates south in late fall to winter in central and southern Cal., Lower Cal., Texas, and northern Mexico; accidental on Key West, Fla. Note, a low, pleasing whistle.

F. TURNSTONES. *Arenariidae*.

Medium sized birds with short bills, pointed and hard at tip; wings long, folding beyond tip of short, slightly rounded

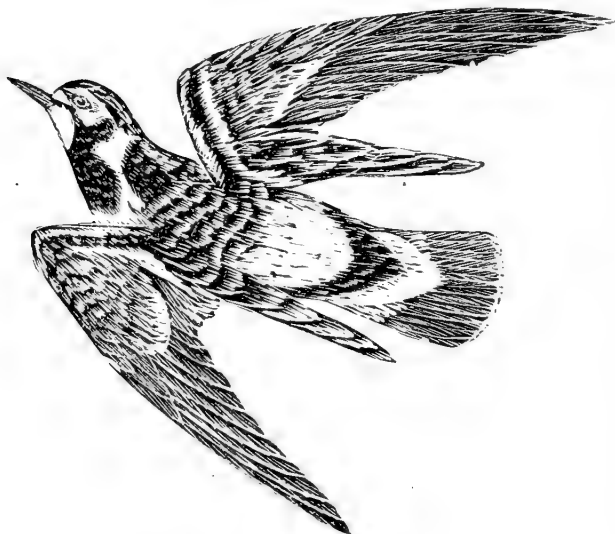
tail; legs, very short; scales of tarsus, continuous in front, hexagonal behind; toes, four and unwebbed; upper tail coverts, white, fig. 111.

a. Turnstones. *Arenaria*.

Characters, as above.

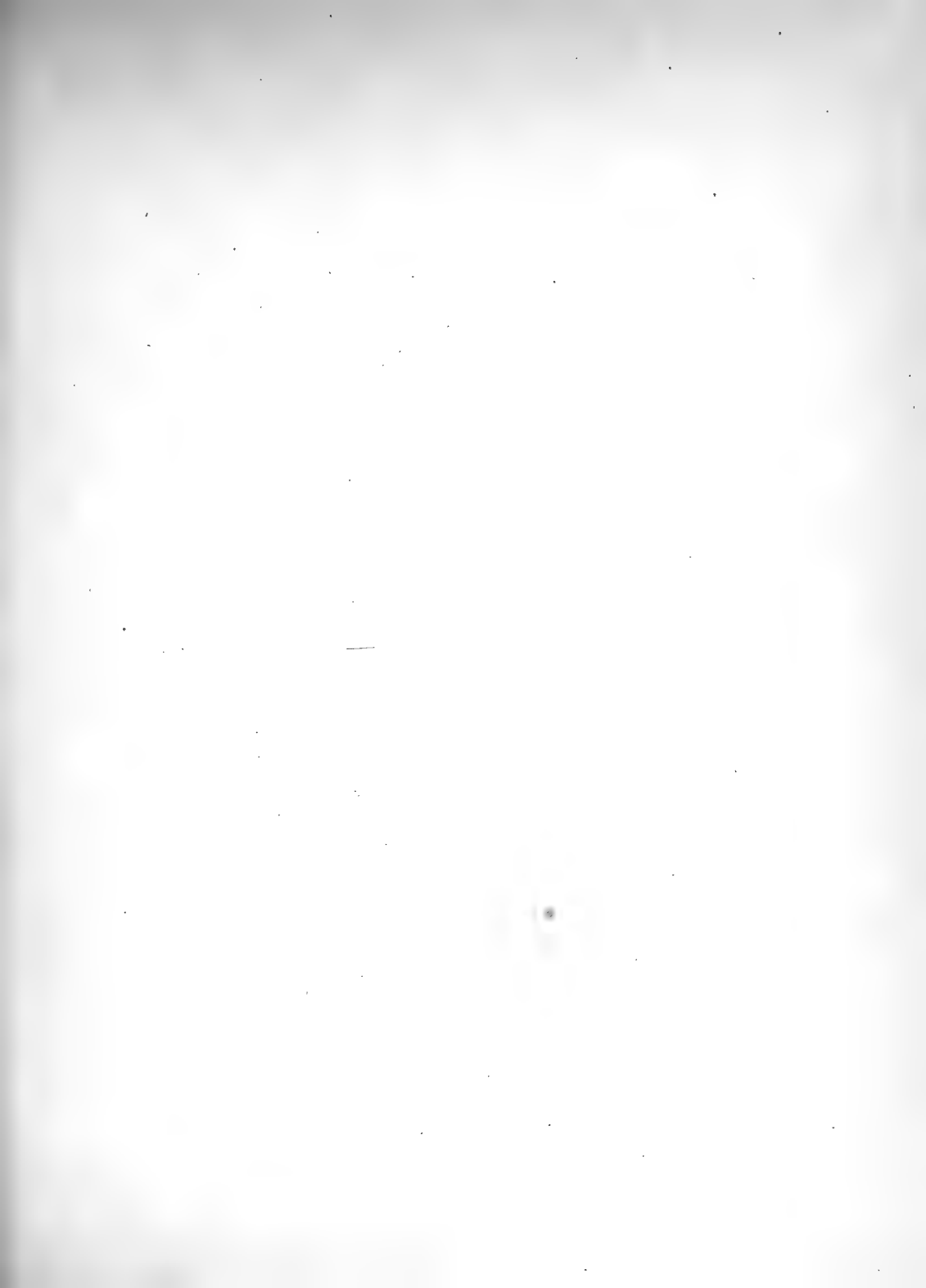
1. TURNSTONE, *A. INTERPRES*. 9.50; bill, 85; forehead, middle and lower back, wing band, upper tail coverts, all of tail, and lower parts, white; large patch on breast, extending along neck to sides of head, V-shaped mark on rump, and subterminal band on tail, black; upper parts, varied with black and reddish, fig. 111. Winter, less reddish above. Young, wholly without rufous above; white markings always conspicuous in flight. Breeds in high northern latitudes of both hemispheres; migrates southward in Aug., Sep., and Oct., when it is common on the Atlantic coast and on the borders of large bodies of water in the interior; winters from the Carolinas south through S. A. to the Straits of Magellan; comes north in April and May. Frequents sandy and stony beaches, where it turns over small stones, seaweed, etc., in search of food, whence its name. Occurs in flocks of from

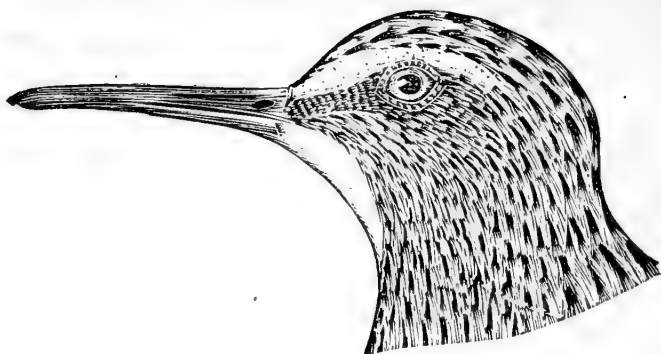
Fig. 111.



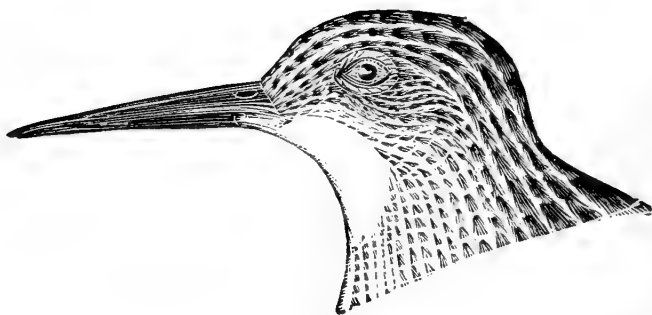
G, F, a, 1. 1-5.

three or four to thirty or more. Call note, a clear, melodious whistle, consisting of two or three notes, also gives a chuckling sound. Flight, moderately swift and direct with strong wing-beats. Less common on the Atlantic coast north of the Carolinas in spring than in autumn.



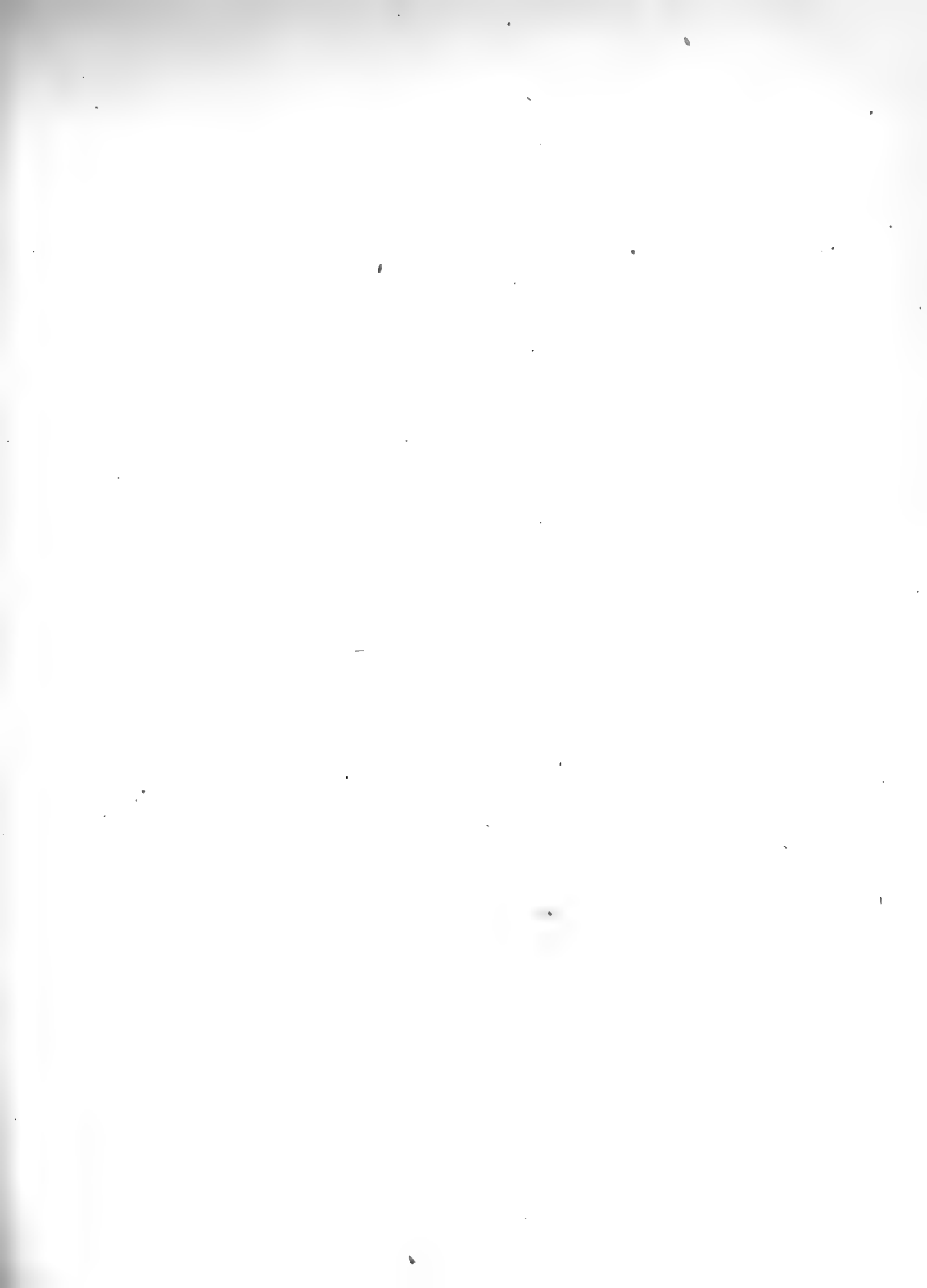


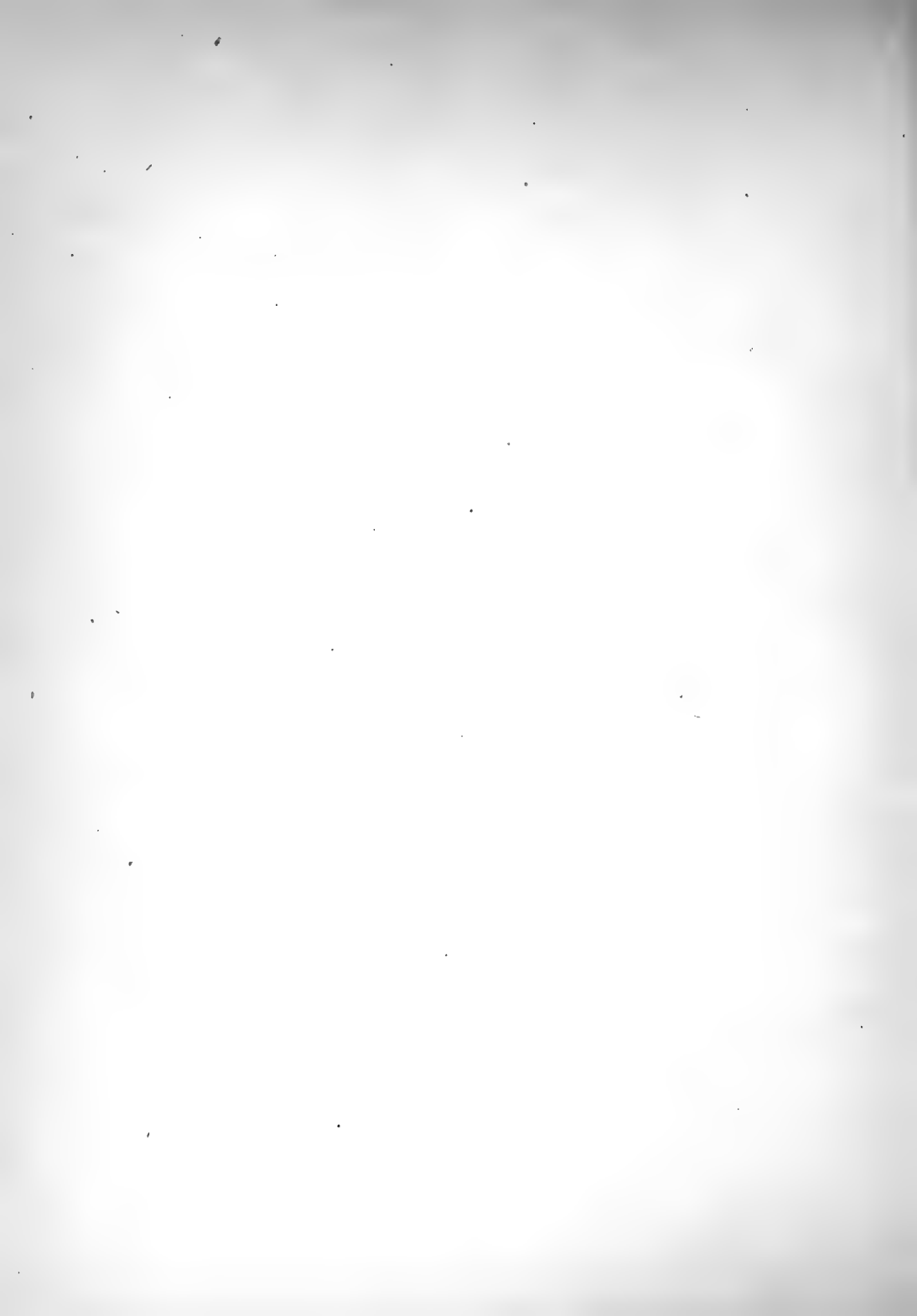
A



B

HEADS OF SANDPIPERS: A, PECTORAL; B, BAIRD'S.





G. Oyster-Catchers. Haematopoidae.

Large birds, black and white or wholly black, with long strongly compressed bills bright red in color, short legs wholly covered with irregular scales, with three unwebbed toes; wings folding at tip of slightly rounded tail. Sexes, similar, fig. 112.

a. Oyster-Catchers. Haematopus.

Characters as above.

1. AMERICAN OYSTER-CATCHER, *H. PALLIATUS*. 19.00; bill, 3.25; head and neck all around, sooty black: upper parts, slaty-brown; large patch on wing, upper tail coverts, and beneath, white; bill and eyelids, carmine: feet, pale pink, fig. 112. Young, with the feathers above bordered with pale buff; black, duller. Downy young, grayish above, palest on head, finely mottled with dusky; white beneath. Breeds on the Atlantic coast from N. J. southward; formerly wintered from the Carolinas south to Patagonia, now rare on the Atlantic coast at this season; accidental along the coast to Grand Menan. Frequents sandy beaches and mud flats feeding largely upon oysters. Flight, slow, but direct, with slow, strong wing-beats. Note, a harsh, discordant scream. Not now very common on the Atlantic coast of the U. S.

Fig. 112.



G, G, a 1. 1-10.

2. OYSTER-CATCHER, *H. OSTRALEGUS*. Differs from 1, in being smaller, 16.00; and in having the white of upper tail coverts extended to lower back. Europe, and parts of Asia and Africa; occasional in Greenland.

H. SPOONBILLS AND IBISES.**Ibides.**

Large birds with long bills, long necks and long legs; the wings are broad, the secondaries being considerably lengthened and are as long or longer than the primaries in the closed wing; tail short; hind toe quite well developed and on a level with the anterior toes which are more or less webbed at base; body stout and compact. Aquatic, frequenting mud flats and muddy shores of both salt and fresh water. Food, crabs, crayfish, and other small crustaceans, also small fishes. Flight, direct and rapid with quick wing beats; the neck is extended and the feet held straight out behind. Nests, placed in trees, composed of sticks. Social, often gathering in large flocks. Cries, harsh and unmusical.

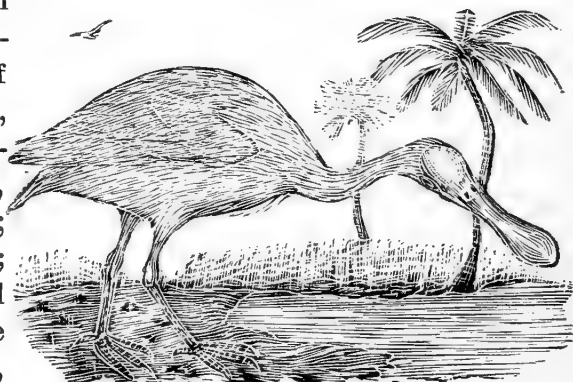
A. SPOONBILLS. Plataleidae.

Bill, flattened, greatly broadened and spoon-shaped at the end; only slightly curved at tip; head and portion of neck naked. Eggs, 2-4, ashy-white spotted and mottled with pale reddish-brown. Sexes, similar, fig. 113.

o. American Spoonbills. Ajaja.

Characters as above.

1. ROSEATE SPOONBILL, A. AJAJA. 30.00; bill, 6.00; rose-pink throughout, lightest on neck; carmine on re-curved feathers of neck, patch on wing, and upper and under tail coverts; tail, brownish orange; naked head, green; space around eye and throat, orange, line on side of head, black; bill, bluish; feet, pinkish; iris carmine, fig. 113. Young, differs in hav-



H. A., o, 1. 1-20.

feet, pinkish; iris carmine, fig. 113. Young, differs in hav-

ing the head feathered and in being much paler in color, without the carmine markings. Resident in the southern Atlantic and Gulf states and the Bahamas, southward to Patagonia. Common in the wilder sections.

B. IBISES. Ibisidae.

Bill, slender and curved for its whole length. Eggs similar to A.

a. Naked-faced Ibises. Guara.

Fore part of head, naked; feathers of crown, short, blended and with rounded tips. Eggs, greenish or grayish-white, spotted with pale brown, fig. 114.

1. WHITE IBIS, *G. ALBA*. 24.00; bill, 5.25; white throughout; tips of

four outer primaries, black glossed with green; bill, naked space about head, and feet, yellow; iris, blue, fig. 114. Young, head, neck, and above, slaty-brown,

Fig. 114.



glossed with greenish, lower back, rump, upper tail coverts, and beneath, white; top of head, wholly feathered. Resident in Florida and other Gulf States, Greater Antilles, and northern S. A.; migrating north in summer to N. C. and Ill.; casually to Long Island and Conn.

H, B. a 1. 1-4.

2. SCARLET IBIS, *G. RUBRA*. 29.00; bill 6.00; bright scarlet throughout; tips of three or four primaries, glossy blue-black. Young, dark brownish-gray; belly, white. Resident on eastern coast of tropical America: accidental in Fla., La., and Texas.

b. Crested Ibises. Plegadis.

Head, wholly feathered, excepting in front of eyes, elongated on crown and lanceolate, forming a short crest. Eggs, greenish-blue unspotted, fig. 115.

1. GLOSSY IBIS, *P. AUTUMNALIS*. 23.00; bill, 5.00; head, neck, lesser wing coverts, and beneath, dark chestnut; above, metallic green, bronze, and purple; space in front of eye, greenish. Bill and feet, brown, fig. 115. Young, grayish-brown with head and neck streaked with white. Downy young, blackish throughout; broad white band crossing crown. Warmer parts of eastern hemisphere; not uncommon in extreme southern portion of eastern U. S.; wandering casually as far north as N. E. and Ill.; accidental in the greater Antilles.

Fig. 115.



2. WHITE-FACED GLOSSY IBIS, *P. GUARAUNA*. Differs from 1 in having the feathers at base of bill white, and the space in front of eye, lake-red. Downy young, without white on crown. Western U. S. south to the Argentine Republic; occasionally breeding in Fla.

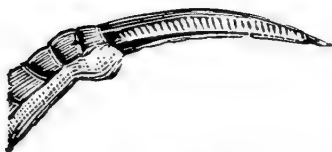
H, B, b, 1. 1-16.

I. HERONS. Herodiones.

Wading birds with long legs and necks, long, pointed bills; space in front of eye, naked; wings, broad; tail, short; toes, long with the nail of the middle one comb-like; fig. 116; portion of plumage of breast and sometimes of the sides of rump, shortened and greatly modified, forming the powdered down patches; these feathers break up into oily particles and have a strong odor and falling upon the water may serve

to attract fishes. Flight, strong with comparatively slow wing-beats, the neck is doubled backward, the bill held straight forward and the legs extended behind, fig. 117, small figure. Food, mainly fishes (sometimes crabs and other crustaceans and

Fig. 116.



I, A, a, 1.

small mammals) which are secured by being grasped in the bill. Cries, harsh and unmusical. Young, naked when hatched but are soon covered with down; helpless and are fed by regurgitation.

A. BITTERNS. *Botauridae*.

Tail feathers, ten, not stiffened; no plume-like feathers on head or body; lower neck behind destitute of feathers, fig. 117.

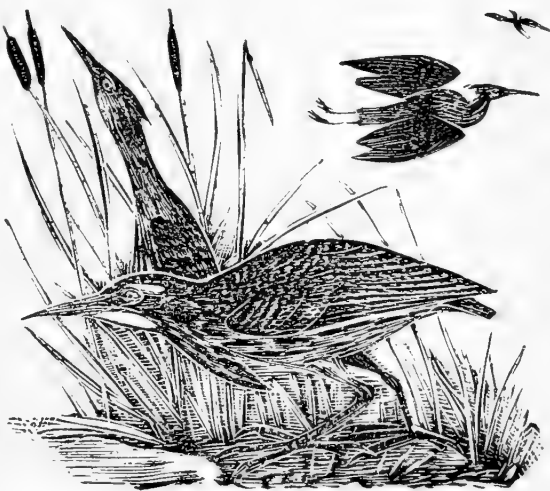
a. Striped Bitterns. *Botaurus*.

Oesophagus, modified during the breeding season into a sound-producing organ. Sexes, similar. Young, not strikingly different. Nests, placed on the ground, usually in fresh-water bogs; eggs, 3-6; greenish-ash or brown. Never gregarious even when breeding.

1. AMERICAN BITTERN, *B. LENTIGINOSUS*. 28.50; bill, 3.00; above dark brown sprinkled and spotted with yellowish; beneath, and

Fig. 117.

on sides of head and neck, pale yellowish broadly streaked with yellowish-rufous and dusky; triangular patch on side of neck, black; iris, yellow; bill and feet greenish, fig. 117. Young, similar but somewhat paler. Nestlings, covered with long, yellowish down. Breeds throughout temperate N. A.;



V. A, a, 1. 1-20.

usually nests in inaccessible fresh water bogs but occasionally breeds on salt marshes; migrates south in Oct.; winters from Fla. southward to Guatemala; comes north in April. Common. When not breeding frequents alike fresh and salt

marshes; when alarmed it will often squat amid the grass or will even enter the water leaving only the bill exposed; at other times it will stand perfectly motionless with the body and neck perpendicular and the bill pointed upward, thus resembling a stake. Cries, when started, harsh and sharp; during the breeding season (May and June) the singular oesophagal notes are given; the bird treads down a portion of the grass in a bog upon which it stands with bill pointed upward and air is taken into the gullet in several audible gulps then this ejected rather forcibly, producing two sounds, the first single, the second double, sounding like "*Punk a-pog*"; when uttering these notes the bird bows its head up and down. (For a detailed account of the vocal organs see Maynard's Contributions to Science, Vol. 1, 1889, pp 59-68.)

b. Little Bitterns. *Ardetta*.

Oesophagus not modified to produce sound. Sexes not similar. Young, somewhat different. Nests, placed in reeds, high grass, or bushes, never on the ground; eggs, 3-4; pale, greenish-blue. Size, small; often breeds in scattering communities, otherwise solitary; fig. 118.

1. LEAST BITTERN, *A. EXILIS*. 13.00; top of head, back, and tail black, glossed with greenish; wings, brown;

Fig. 118.



stripe on side of head, sides of neck, and markings on wing chestnut; upper wing coverts, and beneath, buffy-yellow, mixed with white; spot on sides of breast, brown; naked space in front of eye, bill and feet, yellow, fig. 118. Temperate N. A.; breeding in eastern U. S. from Mass. (where it is not common) to Fla. (where it is abundant), in May and June; migrates south in early Sep.; winters from Fla. south to Brazil, rare in

I, A, b, 1, 1-6. the Bahamas and West Indies; comes north in May.

2. CORY'S LEAST BITTERN, *A. NEOXENA*. Differs from 1 in having the lower parts uniform reddish-chestnut and in being darker above. Southern Fla.; Ontario; Mich.; rare.

B. HERONS. *Ardeidae*.

Tail feathers, twelve stiffened. Either head, lower neck in front or back, and sometimes all three provided with plume-like feathers in the breeding season, absent in adults at other times and in the young. Lower neck behind quite well feathered. Sexes similar. Nests, placed in trees, composed of sticks; eggs, 3-5, greenish-blue. Flight, direct; wing-beats, slow. Usually gregarious when breeding, fig. 119.

a. Large Herons. *Ardea*.

Size, large. Head, neck, and back plumes, present, lanceolate; barbs not spreading nor elongated. Neck and legs, long. Solitary when not nesting, fig. 119.

1. GREAT WHITE HERON, *A. OCCIDENTALIS*.
Fig. 119.

Large, 47.00; bill, 6.50; pure white; bill and iris, yellow; feet and space in front of eye, greenish. Occurs on the low, mud-bordered Fla. Keys; nowhere very common; rare in the interior of the state as far north as Lake George; accidental in Cuba and Jamaica. Breeds in March, nesting on low trees.



2. WURDEMAN'S HERON
A. WURDEMANI. Size of 1; differs in being bluish ash above, in having streaks of black on sides below, streaks of black and rufous on neck

I, B, a. 3. 1-12.

in front, and bend of wing, and tibia, chestnut; top of head,

white with forehead streaked with black. Resident on Fla. Keys; rare.

3. **WARD'S HERON, A. WARDI.** Slightly smaller than 2; differs in having the lower parts more broadly streaked with black with a large black patch on sides of breast, and the occiput with its plume and sides of head, black, leaving the middle of the crown and forehead white; neck, yellowish-gray, fig. 119. Young, with top of head, dull slate; neck darker and marked with reddish; back marked with reddish. Resident in Fla., breeding in March, nesting usually on high trees.

4. **GREAT BLUE HERON, A. HERODIAS.** Differs from 3 in being smaller, 45.00; bill, 5.50, and in usually having more black below. Breeds throughout entire N. A. from the Arctic regions southward, excepting possibly Fla., Bahamas and the West Indies, nesting in high trees; migrates southward in Sep., Oct., and Nov.; winters from the Carolinas southward to northern S. A.; occasionally as far north as Mass.; comes north in March and April. Common.

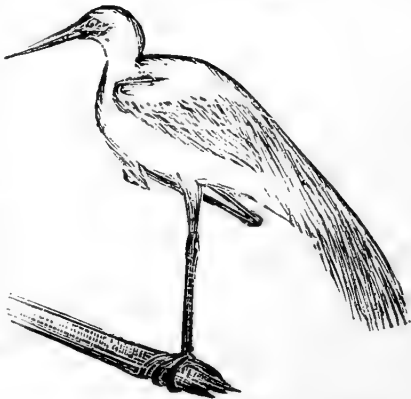
5. **EUROPEAN BLUE HERON, A. CINEREA.** Differs from 4 in being smaller, 37.00; bill, 4.80, and in having the bend of wing and tibia white. Northern portions of eastern hemisphere; accidental in southern Greenland.

b. Plumed Herons.

Fig. 120.

Herodias.

Size medium. Back plumes, greatly elongated, reaching beyond end of tail, straight, stiffened with barbs separated and lengthened; head and breast plumes absent, fig. 120. Color, always white. Wing-beats rather slow. Gregarious at all times.



1. WHITE HERON, H.

I, B, b, 1. 1-30.

EGRETTA. 38.00; bill, 4.00; iris, pale yellow; bill, orange;

feet, black, fig. 120. Breeds through temperate and tropical America from N. J., Minn., and Oregon south to Patagonia; casually on the Atlantic coast as far north as Nova Scotia. Now not common anywhere in the U. S.

c. Egrets. *Garzetta*.

Size, small; head, breast, and back plumes well developed with separated and lengthened barbs which are more or less recurved at tips, fig. 121. White in color. Wing-beats, rapid. Nests, placed in low trees. Gregarious at all times.

1. SNOWY EGRET. *G. CANDIDISSIMA*. 23.75; bill, 3.70; bill and legs, black; feet, and space at base of bill, orange; iris, yellow, fig. 121. Tem-

perate and tropical America from N. J. south to the Argentine Republic and Chili; casually as far north as Nova Scotia. Now not common anywhere in the U. S.

Fig. 121.



d. Dichromic Egrets. *Dichromanassa*.

Size, medium. Back plumes well developed with separated, lengthened,

straight, stiffened, barbs; head and neck without plumes but are provided with lengthened, lanceolate, slightly curled feathers. Color, white, reddish or mixed. Wing-beats, about as in **b**. Nests, placed in low trees.

I, B, c, 1. 1-8.

1. REDDISH EGRET. *D. RUFA*. 30.00; bill, 4.00; plain slate-gray; head and neck rufous tinged with violet; bill, black with basal half and space in front of eye, bright purple; iris, white; feet, blue-black. Young, plain grayish, tinged with light rusty. Resident in southern Fla. mainly on the extreme southern and western coasts west along the Gulf coast to Texas and both coasts of Mexico and Guatemala; Andros, Bahamas; in summer wandering north to

southern Ill. recorded from Cuba and Jamaica: now rare in the U. S. Breeds in May.

1*. CHANGING EGRET, *D. R. MUTATA*. Differs from 1 in having the plumage irregularly mixed with white. Young, similar to 1 or possibly occasionally mottled with white. Not rare on west coast of Andros, Bahamas, casual in Fla. Breeds in May. (See birds of Eastern North America, Revised Edition, 1896.)

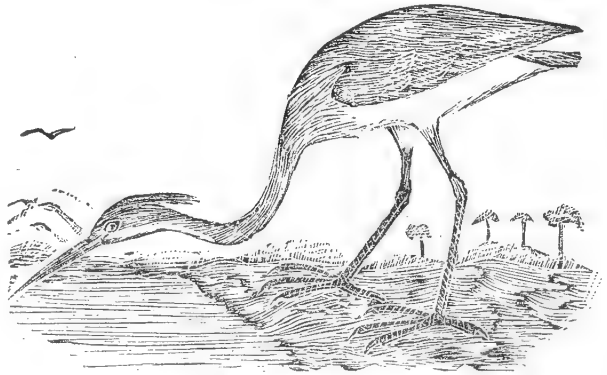
2. PEALE'S EGRET, *D. PEALEI*. Differs from 1 in being pure white throughout. Resident in southern Fla. mainly the east coast, west along the Gulf coast to Texas, Honduras and both coasts of Guatemala; Andros and Inagua, Bahamas; recorded from Cuba. Breeds in Feb. (Inagua); April and May (Andros, and Fla.).

Fig. 122.

e. Damsel Egrets.

Hydranassa.

Slender herons with long, slender bills and necks. Head plumes, rather short, barbs, separated; neck plumes lengthened and lanceolate; back

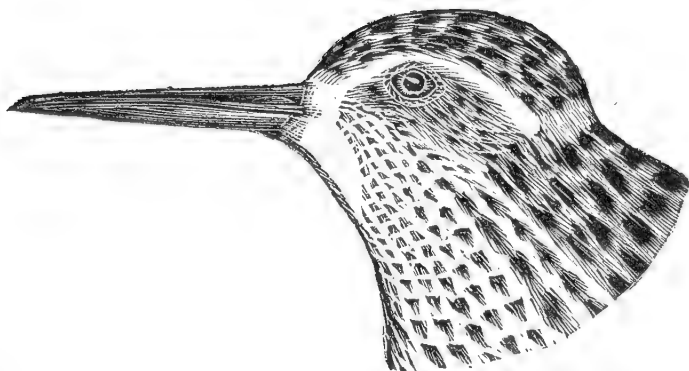


I, B, e, 1. 1-6.

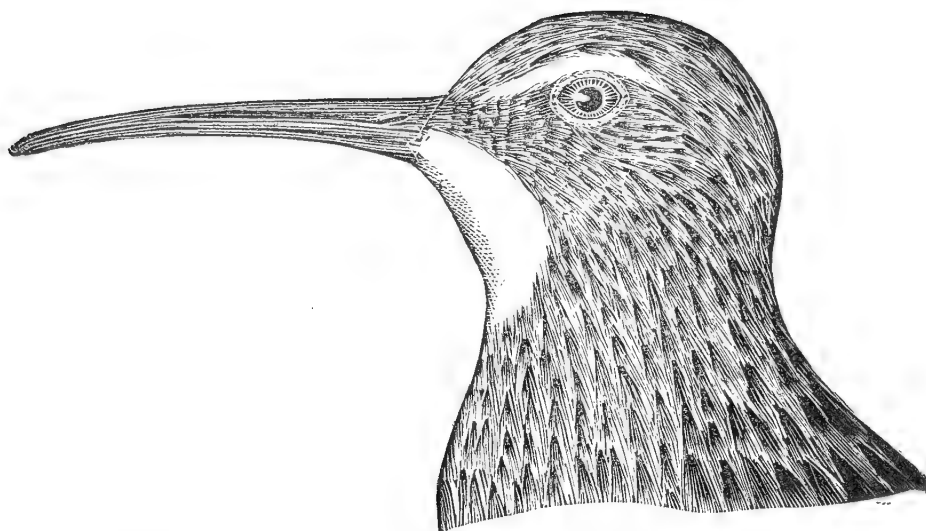
plumes, long, with separated barbs, soft and hair-like. Wing-beats, rapid, fig. 122.

1. LOUISIANA HERON, *H. RUFICOLLIS*. 25.50; bill, 3.75; above, ashy-blue tinged with chestnut-red; occipital plumes and line down neck in front rufous and white; back plumes, yellowish-ash; beneath, pure white; iris, rosy-red, bill and space in front of eye, cobalt-blue, tip of former, black; feet, dark-plumbeous, fig. 122; in winter iris, bill and feet are greenish, becoming yellow towards spring. Young, much tinged with reddish on neck and wings. Resident in the Gulf States, Mexico, Central America, Bahamas, and the West Indies; casual northward to N. J. and Ind. Breeds in May, placing its nests in low trees. Common and unsuspicious. Solitary when not mating.

PLATE 9.

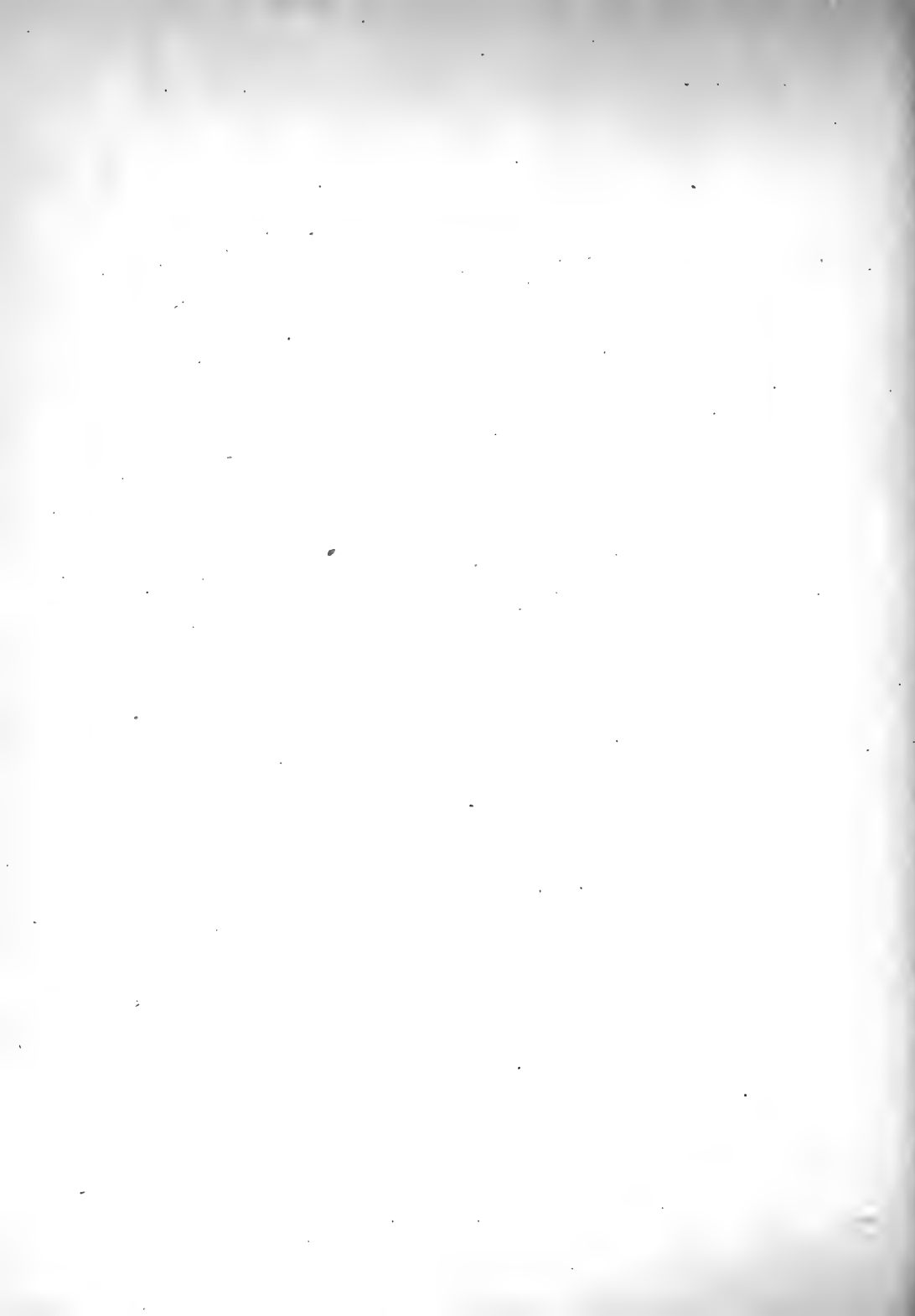


B



A

HEADS OF SANDPIPERS: B, WESTERN; A, RED-BACKED.



f. Blue and White Herons. Florida.

Rather small herons with lanceolate plumes on neck and back and slightly filamentous ones on head. Colors, blue and white, fig. 123. Gregarious at all times, but solitary individuals are not infrequently seen in winter.

Fig. 123.

LITTLE BLUE HERON, F. CAERULA. 21.75; bill, 3.25; dark slaty-blue; head and neck, maroon, more or less tinged with bluish, fig. 123. This is the usual plumage, but some specimens are white with tips of primaries bluish, while others occur in all stages of mixed dress between the white and blue. Young always white with tips of primaries bluish, without the plumes. Iris, yellow, bill, black; basal half, space in front of eye, and feet, greenish. Eastern U. S. from N. J., Ill., and Kan. southward through the Bahamas (where not common), the West Indies to northern S. A.; casually north on the Atlantic coast to Mass. and



I, B, f, 1. 1-8.

Me; winters from the Carolinas southward. An agile species, springing into air very quickly and flying with rapid wing-beats.

Fig. 124.



Me; winters from the Carolinas southward. An agile species, springing into air very quickly and flying with rapid wing-beats.

**g. Green Herons.
Butorides.**

Small, rather short-legged herons, with compact, lanceolate head and back plumes. Back, green or brown. fig. 124.

1. LITTLE GREEN HERON, B. VIRESCENS. 17.50; bill, 2.25; top of head and back, green-

I, B, g, 1. 1-6.

ish (looking dark in the living bird when seen at a distance); neck, chestnut-red with line down middle in front, of mixed black and white; beneath, brownish slate; iris and bill, yellow; bill and space in front of eye, brown and yellow, fig. 124. Young, more or less marked with reddish above. Breeds through temperate N. A. southward to Fla. and southern S. A. A very agile species springing into air quickly and flying with rapid wing-beats. Note, a rather shrill cry frequently repeated several times. Common, frequenting the swampy margins of rivers and ponds where it breeds, placing its nest in low trees or bushes, sometimes, as among the Florida Keys, at the base of mangroves near the ground. Rather solitary, but sometimes associating in scattered communities to breed. Winters from the Carolinas southward.

h. Night Herons. *Nycticorax*.

Medium sized, quite robust herons with thick bills, short legs, and large eyes; no elongated plume feathers excepting two or three long and narrow ones on back of head, fig. 125. Colors, whitish or ashy with top of head and back black. Largely nocturnal in habit.

1. BLACK-CROWNED NIGHT HERON, *N. NAEVIUS* 25.00; bill, 3.00; ashy-white, darkest above; top of head and back, black glossed with greenish; bill, blackish; feet, yellow; eyes, carmine, fig. 125. Young, the second year lack the white head plumes and are much tinged with rufous above, the black showing only in patches. Young, the first year are streaked throughout with yellowish-white and brownish, fig. 125, small figure. America as far north as Manitoba and Ontario and as far south as the Falkland Islands and eastward through the Ba-

Fig. 125.



I, B, h, 1. 1-8.

hamas and the West Indies, breeding over most of its range; migrates southward in late Oct. to winter from the Carolinas southward, occasionally remaining as far north as Mass. Comes north in April. Common. Flight rather slow with quite slow wing-beats. Although nocturnal, may often be found feeding by day, especially when breeding, frequenting salt marshes and inland waters. Cry, a harsh, abruptly given "qaawk" uttered in flight, and some guttural sounds best heard on the breeding grounds. Social at all times, roosting in companies by day and feeding together by night. Nesting time from March (Fla.) to June (Northern N. E.).

i. Thick-billed Night Herons. *Nyctanassa*.

Differs from *h* in having the bill thicker, both head and back plumes and the top of head and back without a black patch, fig. 126

1. YELLOW-CROWNED NIGHT HERON, *N. VIOLACEA*, 23.00; bill, 3.00; differs from *h*, 1 in being darker in all plumages, ashy-blue in adults, streaked with black above, with crown and sides of head, yellowish, fig. 126. Young

are darker than in *h*, 1, the prevailing color above very dark greenish-brown, streaked with lighter. America from the Carolinas and the lower Ohio Valley south to Brazil and Peru, casually north to Mass. Breeds in April. Cry, similar to that of *h*, 1, but not as harsh and is less seldom given. Often feeds by day; a

large portion of its food consists of crabs. Somewhat social when breeding, often nesting in small communities, but more solitary at other times. Flight, quite rapid, with rather quick wing-beats.

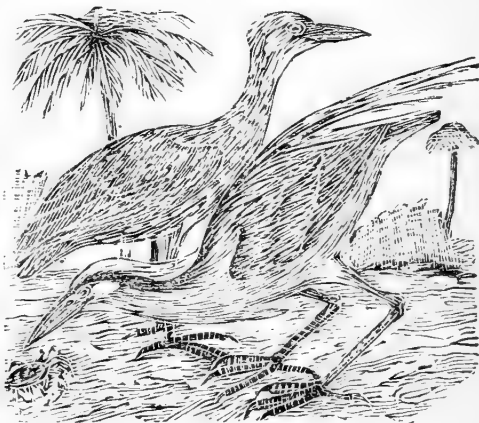


Fig. 126.

I, B. i, 1. 1-8.

J. STORKS. Ciconiae.

Large, stout birds with necks, legs and bills quite long; head and a portion of neck often destitute of feathers. Hind toe not much elevated. Young, helpless.

A. WOOD IBISES. Tantalidae.

Bill, longer than head, stout at base, strongly curved at tip; head in adults destitute of feathers and covered with scale-like projections of the skin. Under tail coverts projecting beyond tail. Colors, mostly white with primaries and tail black.

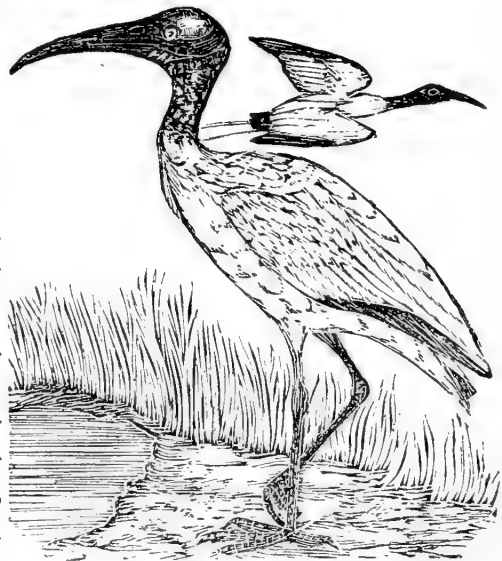
a. Wood Ibises. Tantalus.

Characters as above, fig. 127.

1. WOOD IBIS, *T. LOCULATOR*. 43.00; bill, 8.00; white, primaries and tail glossy, greenish-black with a bronze iridescence; under wing coverts, pinkish in breeding plu-

Fig. 127.

mage; bill, and naked skin of head, blackish, neck, covered with whitish scales, legs and tarsus, black, feet yellow; iris, brown, fig. 127. Young, head and neck mostly covered with grayish-brown feathers, and body plumage dull. Nestlings, pure white. Southern U. S. north to the Ohio Valley, south to the Argentine Republic; has occurred casually in Pa. and N. Y. cries harsh and discordant. Nests, composed of sticks and



placed in trees in swamps. Eggs, 1 or 2, chalky-white, sometimes faintly spotted with reddish, they are deposited in April in Fla., a little later further north. During the

J, A, a, 1. 1-10.

breeding season and in summer the species is social and frequents ponds and pools in marshes, swamps and in the pine woods, but in winter are apt to live in thick swamps, and are then more solitary; in flight, head and neck outstretched, wing-beats, slow, at all seasons rise high in air and circle about for a long time. Perch on trees, especially at night. Common. Has occurred in Mass.

K. CRANES. Grues.

Differ from **J** in having the hind toe smaller and elevated; front portion of head only (in our species) destitute of feathers. Nests, placed on the ground in fresh-water marshes; eggs, one or two, yellowish-brown. Young, leave the nest early and follow the parents. Not very social.

A. CRANES. Gruidae.

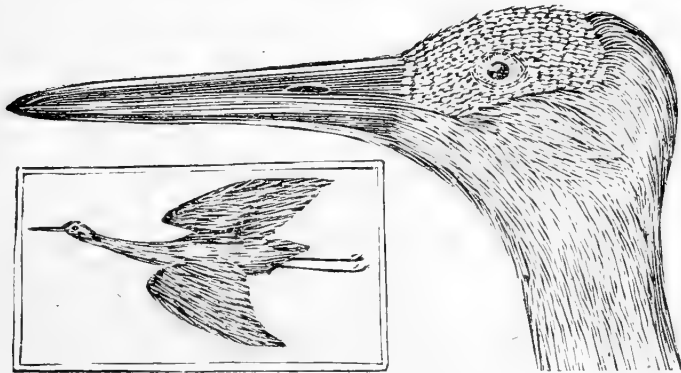
Characters as above.

a. Grus. Crying Cranes.

Head destitute of feathers on front part and covered with a scaly skin. Emit loud, harsh, continuous gobbling cries. Many species dance with half raised wings.

1. SANDHILL CRANE, *G. MEXICANA*. 41.00; bill, 5.00; slaty-blue throughout, primaries, brownish; bill and feet,

Fig. 128.



K, A, a, 1. 1-4.

black; naked space about head, lake: iris, ruby-red, fig. 128
Young, more or less tinged with yellowish above; iris, yellow

Southern portion of N. A. Rather common in Fla., frequenting marshy places in the pine woods and elsewhere. Shy and difficult to approach.

2. WHOOPING CRANE, *G. AMERICANA*. 52.00; bill, 5.50; white, primaries, black. Young, yellowish; otherwise as in 1. The wing-beats of both species are slow, and in flight the neck and head are outstretched. Both species soar high in air much as in *J*, *A*, *a*, 1.

L. CRYING BIRDS. *Arami*.

Based upon the Limpkin, *A. GIGANTEUS*, the chief characters of this order are; Bill, much longer than the large head; neck, long; wings, rather long, folding nearly to tip of short tail, broad with ten primaries, the outer of which is curved inward and enlarged at the terminal end and is much shorter than the others; secondaries broad, and the inner are as long as the primaries. The tendon of the lesser pectoral muscle is ossified along the coracoid. Tibia, naked for half its length; tarsus and toes, long with reticulated scales. Feathers of body, especially above, broad and large. Tongue, long and slender; trachea, in adult males, convoluted into three or four whorles near the middle; sternum, narrow without indentations on posterior margin. For other internal structure see Maynard, Birds of Eastern N. A. in both editions, and Contributions to Science, Vol. III. Colors, brown with arrow-shaped marks of white, fig. 129. Sexes, similar.

A. COURLANS. *Aramidæ*.

Characters as above.

a. Limpkins. *Aramus*.

Characters as under **L**.

1. LIMPKIN, *A. GIGANTEUS*. 26.00; bill, 4.50; brown, more or less glossed with purplish above, each feather of body and neck marked with an arrow-shaped stripe of white; throat white; bill, feet and iris, brownish. Young, duller, with narrower stripes. Nestlings, black. Fla., Greater Antilles and Central America. Common. A noisy bird with partly nocturnal habits, that occurs on the borders of swamps.

Cries, very loud and discordant; when alarmed gives a chuckling note, and the head is jerked back and the tail held erect; runs among bushes with great swiftness. Food, chiefly the animals of fresh-water mollusks. Nests, composed of sticks placed in bushes near water; eggs, 5 to 7, dull buff spotted with brown and grayish. Flight, heavy with slow wing-beats, the head is out-stretched and the feet held dangling, fig. 129.



L, A, a, 1. 1-8.

heavy with slow wing-beats, the head is out-stretched and the feet held dangling, fig. 129.

M. RAILS, GALLINULES AND COOTS. Ralli.

Medium sized or small birds with strong legs and long toes, and compressed bodies which enable them to pass through the herbage of marshes which they chiefly inhabit. The wings are short and rounded and all of the species are poor flyers, usually moving in a straight line with rapid wing-beats and dangling legs; in alighting will drop to the ground or water. Food, insects, aquatic animals and vegetable substances. Young, covered with down when hatched and active.

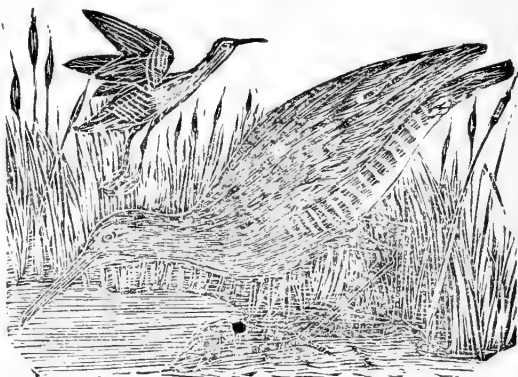
A. TRUE RAILS. Rallidae.

Marsh birds with closely blended, rather stiffened plumage, quite dull in color; toes, without lobes. Nests, placed on the ground in marshy places; eggs, 5 or more. Cries, harsh and craking. Although not strictly social, some species live in scattering communities. Downy young, black. Partly nocturnal. Skulk in the herbage and are difficult to start. Swim with ease, and even rise from the water. Also dive well and cling to submerged vegetation.

a. Long-billed Rails. *Rallus*.

Bill, longer than head, and slightly curved; color, red or reddish beneath without prominent black markings, fig. 130.

1. KING RAIL, *R. ELEGANS*. 18.00; bill, 2.50; ashy-red above distinctly streaked with dark-brown; chestnut-red on wing coverts and beneath; dusky-brown on under wing coverts and flanks banded with white; throat, line from bill to over eye, and abdomen white; iris, bill and feet, brownish, fig. 130.



Eastern U. S., north to the middle states and casually to Mass., Me. and Ontario. Occurs usually on fresh-water marshes but occasionally found on salt marshes. Common. Breeds in May.

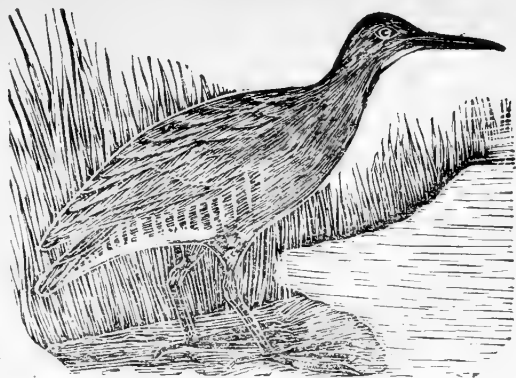
N, A, a, 1. 1-6.

2. VIRGINIA RAIL, *R. VIRGINIANUS*. Similar to 1 but smaller, 9.25; bill, 1.50. Young, much darker, nearly black in earlier stages. N. A. from the British Provinces south to the Gulf of Mexico. Migrates southward in early Oct. to winter from the Carolinas to Guatemala; occasionally found in Cuba; comes north in early April. Common, frequenting bushy marshes. Breeds in early June. Besides the harsh, rail-like craking rapidly given, it gives a chuckling note when slightly alarmed and a sharp squeak when much annoyed. The downy young keep up a constant peeping when running about in the marshes.

3. CLAPPER RAIL, *R. CREPITANS*. 14.00; bill, 2.25; Differs from 1 in being bluish-ash above indistinctly streaked with greenish-brown; reddish of wings and beneath paler tinged with bluish on breast; dusky of lower parts bluish; throat, creamy; line in front of eye, reddish, fig. 131. Atlan-

tic and Gulf coasts of the U. S. north to Conn., casual in Mass.; Resident from the Potomac southward. Breeds in March and April. Abundant. Notes, the usual rail-like crake and a harsh scream when annoyed.

Fig. 131.



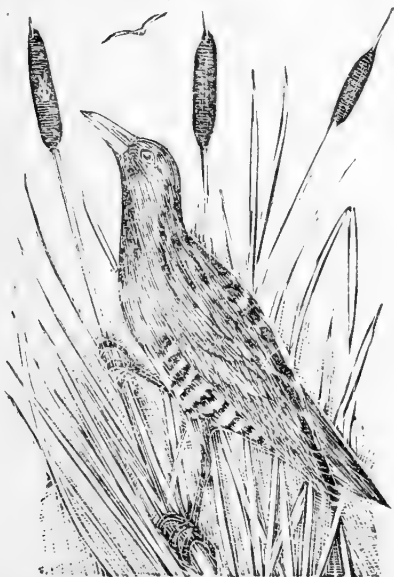
3*. LOUISIANA CLAPPER RAIL, *R. c. saturatus*. Similar to 3 but paler ashy above and more broadly and distinctly streaked with greenish and deeper red below. Coast of Louisiana.

M, A, a, 3. 1-4.

4. FLORIDA CLAPPER RAIL, *R. scottii*. Differs from 3 in having a more slender bill and in being darker above, nearly black; below, ashy-gray mixed with cinnamon. Salt marshes of western Fla.

b. Short-billed Rails. Porzana.

Fig. 132.



Bill, shorter than head, slaty and white; face and throat black

1. CAROLINA RAIL, *P. carolina*. 8.75; bill, .85; line back of eye and upper parts, brownish-yellow broadly streaked with brown and very distinctly dotted and short-lined with white; line on top of head, face and throat, black; breast, and sides of neck and head, slaty-blue; remaining under parts, white banded with white and dusky on sides and flanks; iris, brown, bill, yellow, feet, green, fig. 132. Young, differ in being overwashed with reddish below and the black markings are ab-

M, A, b, 1. 1-2.

sent. Downy young, black with orange bristles at base of bill. Temperate N. A., breeding from the middle states northward; migrates southward in early Oct. to winter from the Carolinas to the Bahamas, West Indies and northern S. A.; comes north in April; breeds in early June. Notes not as rapid as in a, 2; gives a whistling note like "*Cur-we*" in addition to some short chuckles, also gives a piping cry when alarmed. Very common in nearly all fresh-water marshes if wet enough; also occurs on salt marshes, especially during migration.

2. SPOTTED CRAKE, P. PORZANA. A little smaller than in 1 with head, neck and breast quite thickly spotted with white. Northern parts of the Old World; occasional in Greenland.

c. Buffy Rails. *Coturnicops*.

Small rails which differ from b in being yellowish-buff, in having white secondaries and no conspicuous black markings.

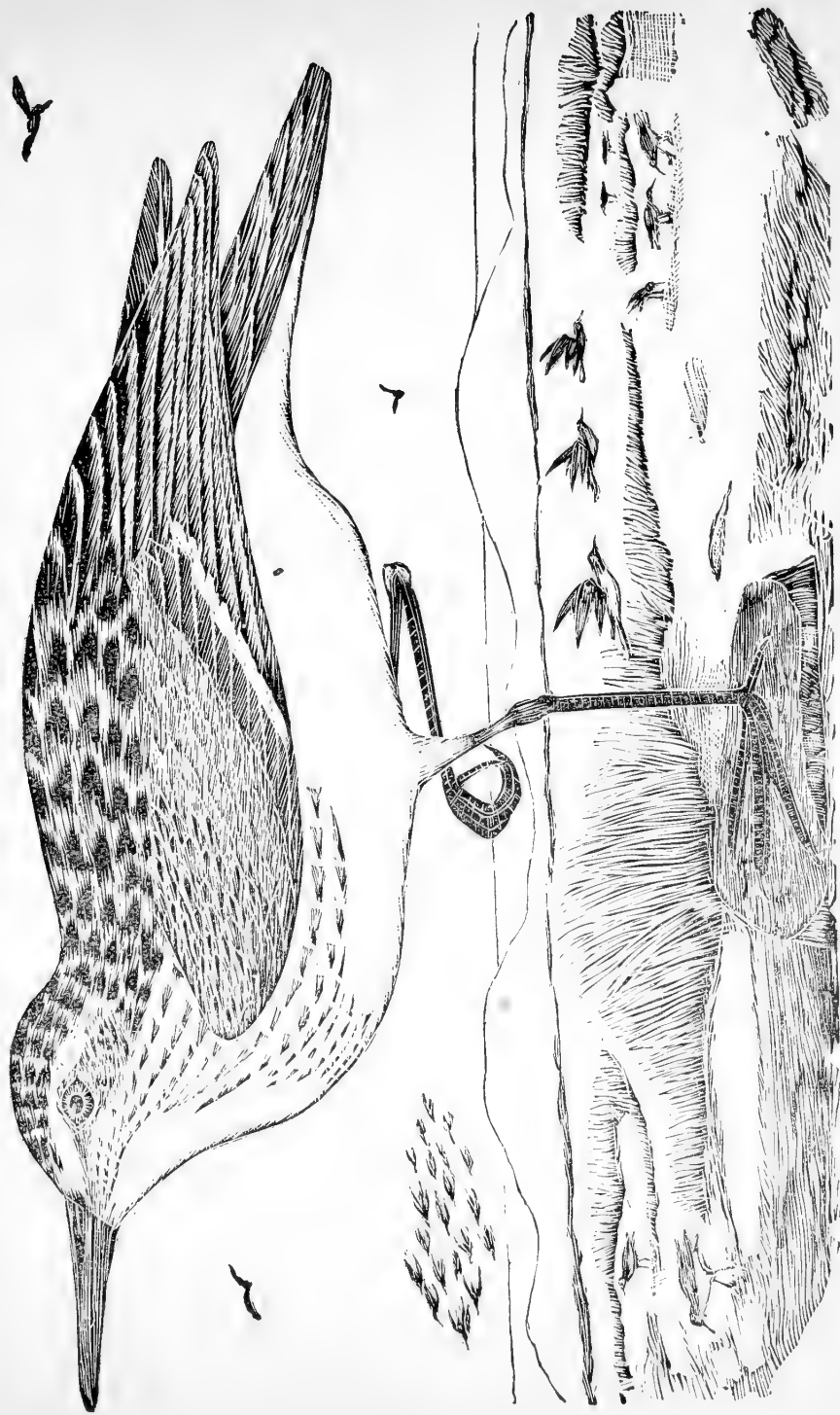
1. YELLOW RAIL, C. NOVEBORACENSIS. 6.75; bill, .55; yellowish-buff becoming reddish on neck, breast and under tail coverts broadly streaked above and on flanks with dark-brown; abdomen, white; white-tipped secondaries, conspicuous in flight. Young paler below. Breeds north of the U. S.; migrates south in Sept. and early Oct. north in May; winters in Fla. and Cuba. When disturbed utters a squeaking sound. Rare.

d. Dusky Rails. *Creciscus*.

Smallest of our rails and very dark in color with no very conspicuous white markings.

1. BLACK RAIL, C. JAMAICENSIS. 5.50; bill, .55; very dark brown above; spotted and transversely banded with white; back and neck chestnut-red; sides of head and under portions, bluish-ash, banded on abdomen and under tail coverts with white. Young, duller; throat, whitish; head, reddish. Breeds throughout temperate N. A. north to Mass.,

PLATE 10.



SEMPIALMATED SANDPIPER.



northern Ill. and Oregon. Very rare everywhere. Winters from Fla. south through the West Indies to Guatemala. Breeds in May; migrates south in Sept., north in April.

a. Land Rails. *Crex*.

Small Rails with longer wings than in b, folding nearly to the end of tail, and with shorter legs; live mostly on dry land among herbage.

1. CORN CRAKE, *C. CREX*. 10.50; bill, .90; Dark brown above mottled with yellowish-brown; upper and under wing coverts, rusty-red; bluish-gray below becoming ashy on throat; flanks, barred with reddish. Europe and northern Asia; casual in Greenland, Bermuda and eastern N. A.

B. GALLINULES. *Gallinulidae*.

Birds that inhabit the grassy or reedy borders of freshwaters with scarcely depressed bodies, but otherwise much like rails under A, b, but the toes are very long and narrow. Bill, shorter than head and with a frontal shield, fig. 134. Somewhat social, occurring in small scattering flocks.

a. Slaty Gallinules. *Gallinula*.

General colors slaty-blue; bill, not very stout, fig. 133.

1. FLORIDA GALLINULE, *G. GALEATA*. 14.00; bill, 1.25; head and neck, dusky; back, bronzy-green; tail and its middle lower coverts,

black, the outer portion of the latter white; tip of bill, yellow; remainder, frontal plate and tibia, sealing-wax red; feet, greenish, fig. 133. Young, duller, overwashed with reddish above, feathers beneath tipped with white; bill and frontal plate greenish. Nest-



Fig. 133.

M, B, a. 1. 14.

lings, black glossed with greenish, no frontal plate, bill yel-

low; feet, black. Temperate and tropical America from Brazil and Chili north to Canada. Common, but rare in Middle States and N. E. Resident in Florida, migratory further north. Not shy, frequently appearing on the borders of streams and other bodies of fresh water; swims well and dives with ease; clings to aquatic vegetation; in swimming the feet are moved as in walking and the head is moved backward and forward with them. Notes, a harsh, rail-like "*Kra*" repeated several times and given more often at night-fall and a metallic "*Chuck*" when annoyed. Flight, direct with rapid wingbeats and dangling legs. Breeds in May; downy young follow the parents as soon as hatched. Eggs, similar to B.

b. Sultana Gallinules. *Ionornis*.

Bill, thick; colors, bright, purple and blue predominating; frontal shield large.

1. PURPLE GALLINULE, I. MARTINICA. 12.50; bill, 1.15; bright brownish-green above; head and under parts, bluish-purple; sides
Fig. 134.

greenish; bill, red tipped with yellow; frontal plate, blue; under tail coverts, white; feet, greenish, fig. 134. Young, duller above and reddish mixed with whitish below. South Atlantic and Gulf States southward through the West Indies, Mexico, Central America



M. B, b 1. 1-4.

and northern S. A. Common; rare or casual north to Me., N. Y., and Wis. Migratory in the U. S., going south in Sep. and coming north in May. Breeds in Fla. in late May or early June. Habits, similar to a, 1.

C. COOTS. Fulicidae.

Differ from **B** chiefly in having the toes widely lobated, and the frontal shield is large.

Fig. 135.



M, C. a, 1.

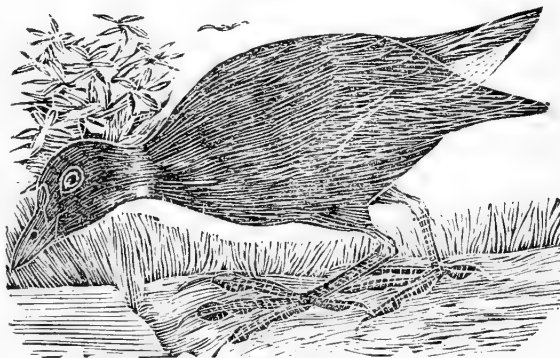
a. Coots. Fulica.

Characters as above.

1. **AMERICAN COOT, F. AMERICANA.** 16.00; bill. 1.30; slaty-blue; head and neck, dusky; tips of secondaries (showing in flight) and under tail coverts, white, the latter with a black line in the center; bill, yellow, white at tip with a band in center and frontal plate, brownish-red; iris, brown; legs, greenish, fig. 136.

Fig. 136.

Young, duller with the feathers more or less tipped with white. Downy young, black. Breeds chiefly in northern U. S. and southern Canada; common, occurring



M, C, a. 1. 1-4.

more rarely north to Greenland and Alaska: migrates southward, (largely through the interior, but occurring in greater or less numbers east to the Atlantic) to winter in the Gulf States and southward through the West Indies, occurring in immense, compact flocks at this season on fresh and brackish waters in Fla.; comes north in May, when less common in the Atlantic States north of the Carolinas. Dives well but does not use the wings under water. Flight, direct with rapid wing-beats; in rising from the water, swims rapid-

ly then runs with flapping wings; in flight the head and neck are outstretched and the feet are held straight out behind. Often leaves the water and walks about among the grass, reeds, etc. When swimming the head is moved as in **B, a, 1**. Notes, half melancholy whistles followed by a guttural chuckle.

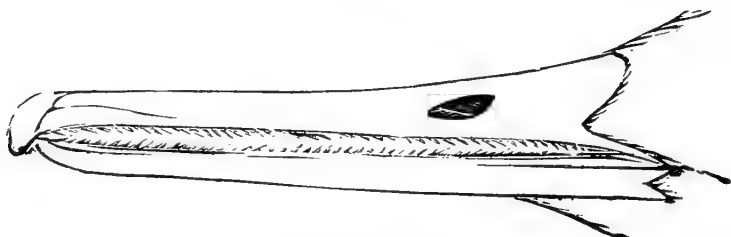
2. **EUROPEAN COOT**, *F. ATRA*. Differs from 1 in having the bill and frontal plate, edge of wing, and first primary, white; there is no white on under tail coverts. Northern parts of eastern hemisphere; accidental in Greenland.

N. NAIL-BILLED SWIMMERS.

Anseres.

Water birds with webbed front toes, closely blended plumage, large bodies, long necks, bill with tooth-like lamellae on sides and with a nail at tip, fig. 136.

Fig. 136.



N, A, a, 1.

A. MERGANSERS. Merginidae.

Long-bodied, long-necked ducks with slender bills in which the lamellae are prominent and inclined backward, fig. 136. Dive well.

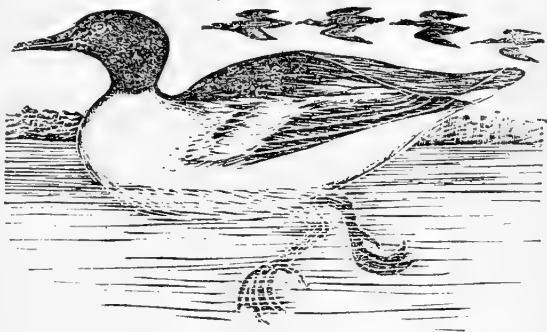
a. Tooth-billed Mergansers. Merganser.

Bill, very distinctly toothed with the teeth well inclined backward, fig. 136. Large white wing-patch.

1. **AMERICAN MERGANSER**, *M. AMERICANUS*. 24.00; bill, 2.00; head, upper neck, and anterior back, black, glossed with greenish and purplish; remainder of back, bluish-ash;

white beneath strongly tinged with salmon: iris, red; bill and feet, orange, fig. 137. Female, head and neck, reddish with a well defined line of demarkation between this color and the white below; entire back, bluish-ash. Young, similar to female. Breeds from Penn. and the mountains of Col. and Cal. northward, in May, nesting in holes of trees; migrates southward in Sep. and Oct. to winter from the Middle States southward to the Gulf of Mexico and more scattering-ly north to Mass.; comes north in April. Common, on fresh waters and occasionally found on salt water, occurring in small flocks. Eggs, 6 to 10, pale buff. Rise obliquely from the water into swift, direct flight with very rapid wing-beats: Cries, harsh but duck-like.

Fig. 137.



2. RED-BREAST-ED MERGANSER, M. SERRATOR. Differs from 1 in being smaller, 22.00; the males have a well-defined crest of lanceolate feathers, the breast and sides of neck are buff streaked with black, and the lower parts are creamy-

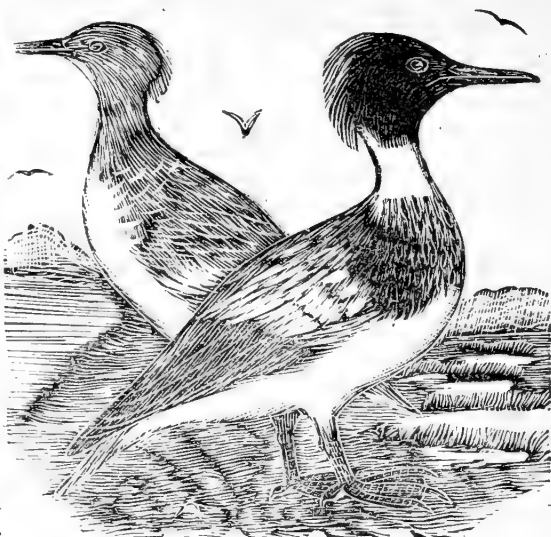
N. A, a, 1. 1-10.

white, fig. 138; the female has the throat less white and the reddish of the head and neck is not separated from the white by a well-defined line of demarkation. Breeds chiefly north of the U. S., placing its nest on the ground; migrates south in Oct. to winter from N. E. to Fla., occurring mainly on the coast often in large flocks; goes north in April. A few occur on fresh waters. Eggs, deposited in May, greenish-brown.

b. Crested Mergansers. Lophodytes.

Bill not as distinctly toothed as in a, and the teeth are not as much inclined backward, fig. 139; head, crested.

1. HOODED MERGANSER, *L. CUCULLATUS*. 19.00;
bill, 1.70; above, head, upper neck, and collar on lower neck, black with violet iridescence; triangular patch on head and crest, some streakings above, spots on wings, and beneath, white; sides, chestnut finely banded with black; iris, orange; bill, black; feet, dusky-orange, fig. 139. Female and young, brown on head, neck and upper parts; white beneath.

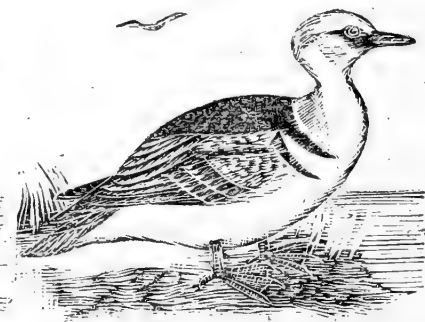
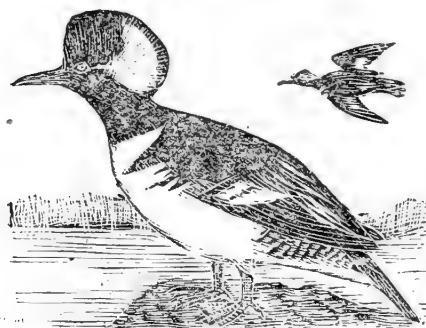


N, A, a, 2. 1-10.

N. A. south to Mexico and Cuba, breeding throughout most of its range; resident from the Carolinas southward. Eggs, 6 to 10, pure white, placed in holes or shallow cavities of trees in May. Common, occurring more often on fresh waters than on salt.

Fig. 139.

Fig. 140.



N, A, b, 1. 1-8.

N, A, c, 1. 1-8.

c. Smews. *Mergus*.

Differ from b in having the bill shorter and the crest not as prominent.

1. SMEW, *M. ALBELLUS*. 16.50; bill, 1.00; white patch in front of eye, back, and two crescent-shaped bars on side of breast, black, fig. 140. Female, top of head, brown, rest of head and beneath, white; back, ashy-brown. Northern Europe and Asia; accidental in eastern N. A.

B. RIVER DUCKS. *Anatidae*.

Bill, widened, flattened and more or less expanded at tip, fig. 143; legs rather short but the birds walk well and often feed on land; terminal portion of inner secondaries, iridescent, forming a shining surface, the speculum.

a. Fresh-water Ducks. *Anas*.

Large-sized ducks with the bill but little expanded at tip. Do not dive for their food but feed by reaching down in shallow water, sometimes tipping the body forward. Nests placed on the ground, eggs, 6 to 12, greenish. Flight, swift and direct with rapid wing-beats. Note of males a low, softly given "*Quack*" often repeated; of females a lower "*Quack*" more harshly given.

1. MALLARD, *A. BOSCHAS*. 24.00; bill, 2.25; head and upper neck, green; lower neck in front and breast, chestnut; lower neck and back, reddish-brown finely banded with white but darker behind and quite black on the upper tail coverts the tips of which are upturned; beneath, back of breast, creamy-white; wings, marked with reddish-brown, white and chestnut; speculum, dark-blue glossed with violet, surrounded by a black border which is margined before and behind with a white band; bill, greenish; feet, orange, fig. 141. Female, and young, dark-brown banded and spotted with yellowish-red which predominates below; speculum, as in male. Northern parts of northern hemisphere; in N. A. breeding south to southern U. S.; most common in north-eastern U. S. during migrations, in April, Sept. and Oct.; a few remain all winter as far north as Mass. but the greater portion pass the winter in the southern states. Breeds in May. In starting from the water, rises obliquely. More common on fresh than

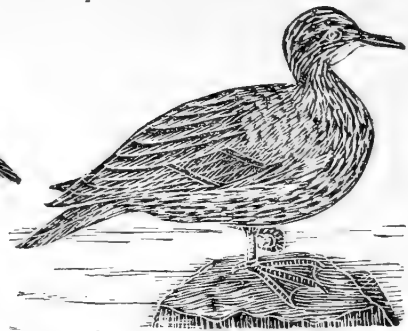
salt waters. Easily tamed and is the origin of many of our domestic ducks.

Fig. 141.



N, B, a, 1. 1-12.

Fig. 142.

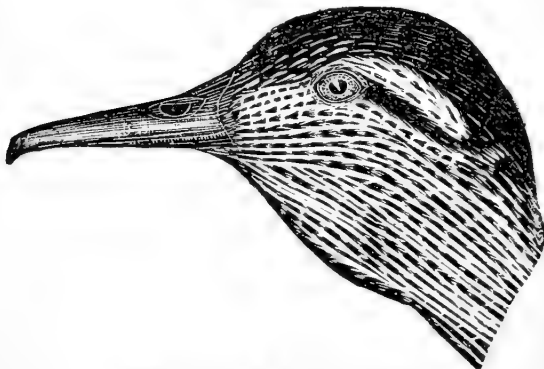


N, B, a, 2. 1-12.

2. BLACK DUCK, *A. obscura*. 23.00; bill, 2.00; dark brown with all the feathers, especially below streaked and margined with reddish-yellow; speculum, green, bordered by black only, fig. 142. Female and young with rather more yellowish; in all stages the throat is clear yellowish with few or no spots; feet, brownish-orange; bill, greenish. Breeds from Massachusetts northward in May; common; more abundant during migration in April and Sept.; winters from Mass. to the Carolinas. In rising from the water or land, springs into air to the height of ten feet or more before darting away in swift flight. More often found on fresh than salt water.

2*. RED-LEGGED BLACK DUCK, *A. o. rubripes*.

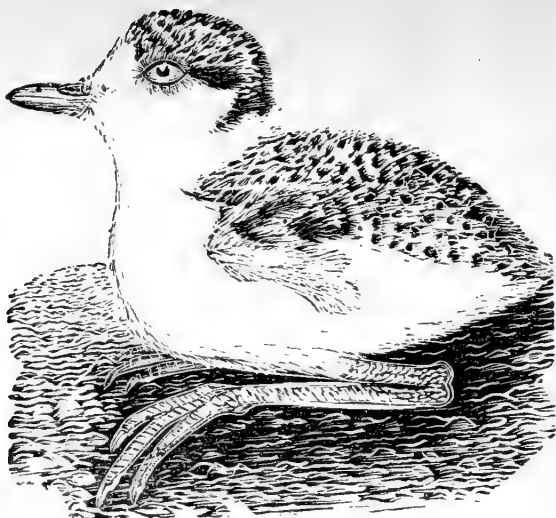
Fig. 143.



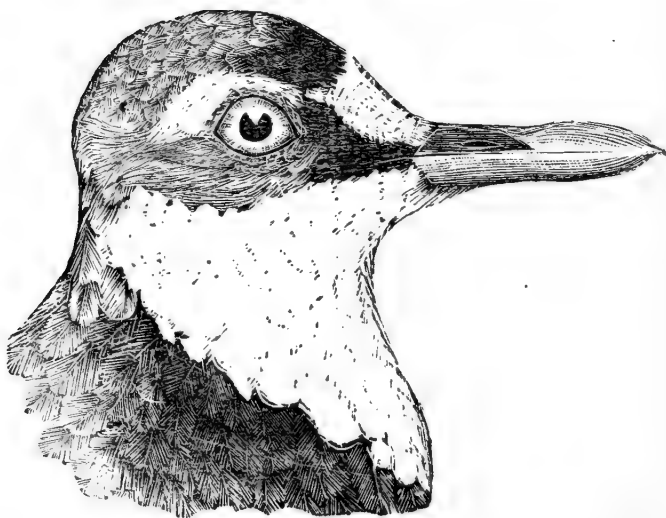
N, B, a 2*. 1-2.

Larger than 1, generally darker; throat, thickly spotted, fig. 143; bill, yellow, feet, red. Breeds north of the U. S.; migrates southward in Oct. to winter in great numbers from Mass. south to the Chesapeake; goes north in April. Occurs more often on





B.



A.

WILSON'S PLOVER: B, YOUNG; A, ADULT MALE.

salt water than on fresh, sometimes occurring along the coast in flocks of hundreds.

3. FLORIDA BLACK DUCK, *A. FULVIGULA*. Differs from 1 in being smaller, much more yellowish with longitudinal marks in the feathers above and V-shaped marks of the same in tail feathers; bill, greenish; feet, reddish-orange. Central and southern Fla. Common, but seldom seen in large flocks. Nests in April.

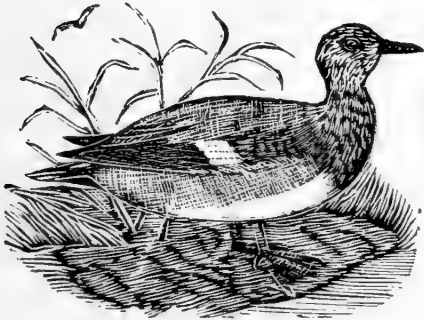
b. Gray Ducks. *Chaulelasmus*.

Medium sized ducks that do not dive, which differ from *a* in having the bill narrower and not at all expanded at tip.

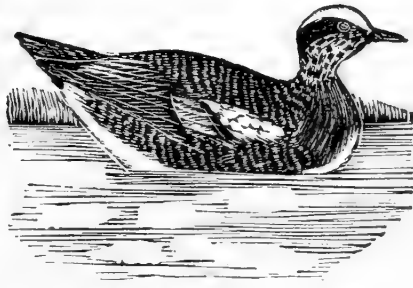
1. GADWALL, *C. STREPERUS*. 21.00; bill, 2.10; speculum, white bordered in front with black; head and neck, yellowish spotted with black; top of head, reddish; upper parts, lower neck and sides, dusky finely banded with white; bill, black; feet, greenish, fig. 144. Female, brownish throughout; speculum as in male. Nearly cosmopolitan; in N. A. breeds in western U. S. where it is common, rare on the Atlantic coast. Migrates south in Nov. wintering as far south as Central America; comes north in April; breeds in May, nesting on the ground; eggs, 6 to 10, pale brownish-buff.

Fig. 144.

Fig. 145.



N, B, b, 1. 1-12.



N, B, c, 1. 1-12.

c. Widgeons. *Mareca*.

Medium-sized ducks with short, narrow bills and top of head whitish.

1. **BALDPATE, M. AMERICANA.** 20.00; bill, 1.50; speculum, black; head and neck, creamy-white finely banded and spotted, excepting on crown, with dusky; lower neck, breast and sides reddish-ash more or less banded with dusky; dark brown above finely banded with white, fig. 145. Female, duller, with crown spotted with dusky. Breeds in the interior of N. A. but chiefly north of the U. S.; eggs, similar to b, 1; winters from the southern border of the U. S. to Central America; migrates south in Nov., north in April. Common, occurring in small flocks or in company with other ducks; rare on the Atlantic coast north of Fla.

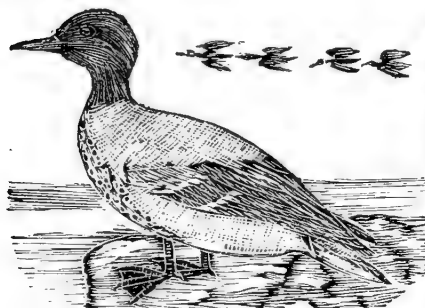
2. **WIDGEON, M. PENELOPE.** Differs from 1 in having the top of head yellowish and the remainder of head and neck, chestnut-red sparingly spotted with dusky; female, speculum gray bordered with white excepting below. Northern parts of the Old World; occurs frequently in eastern U. S.

d. Little Teals. Nettion.

Contains the smallest of our ducks. All have short, narrow bills and are prominently marked with striking colors.

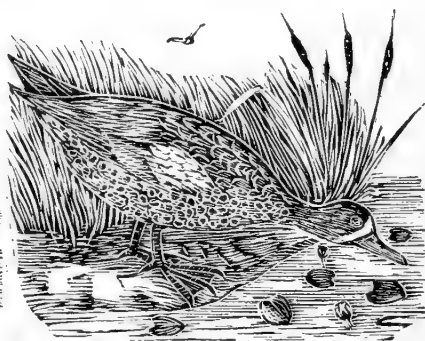
1. **GREEN-WINGED TEAL, N. CAROLINENSIS.** 14.00; bill, 1.60; speculum, green above black below narrowly bordered by white behind; head and neck, chestnut-red with a green line behind eye; brown above finely banded with white;

Fig. 146.



N, B, d, 1. 1-8.

Fig. 147.



N, B, e, 1. 1-8.

crescent-shaped mark in front of wing, ring around neck and beneath, white; breast, purplish with rounded spots of black; under tail coverts creamy with a central line of black; bill

and feet, brown, fig. 146. Female, brown above with feathers edged with whitish; white beneath slightly spotted on breast with dusky. Young, similar to female and all stages occur between this and the male; speculum always as in male. N. A. breeding chiefly north of the U. S. in May: nests on the ground, eggs, 6 to 10, pale brownish-buff; goes south in Sep. and Oct. to winter along the southern border of the U. S. Comes north in April. Common, but less so along the Atlantic border of the U. S. Occurs in small flocks rather more frequently in eastern N. E. on salt than fresh water.

EUROPEAN TEAL, N. CRECCA. Differs from 1 in the absence of the white crescent in front of wing and in having the green band on side of head decidedly bordered with whitish; bandings on sides, coarser; female and young scarcely to be distinguished from 1. Northern parts of Old World; occasional in eastern N. A.

e. Teals. *Querquedula*.

Larger than in d with a prominent blue patch on wing.

1. BLUE-WINGED TEAL, Q. DISCORS. 16.00; bill, 1.62; speculum, greenish-black bordered with white behind; lesser wing coverts blue; head and neck all around ashy-gray; white crescent in front of eye; top of head, black, back, brown; outer webs of scapularies, blue, black and green; beneath, purplish-ash spotted with black; bill, black, feet, yellowish, fig. 147. Female, brown with feathers edged with whitish, more broadly below; speculum, pale. Young, like female with intermediate stages in males. N. A. more common eastward. Breeds chiefly in the interior from Kansas and southern Ill. northward; migrates south in Sep. in small flocks, when it occurs all over our section frequenting small ponds or even pools and occasionally occurring on salt water creeks; winters from the Carolinas southward through the Bahamas and West Indies; comes north in April when it is less common on the Atlantic coast; flight, exceedingly swift; when alarmed, gathers in close bodies on the water. Nesting habits and eggs similar to d, 1.

2. CINNAMON TEAL, Q. CYANOPTERA. Differs from 1 in having the speculum green, head, neck and lower parts rich purplish-chestnut and the feet orange. Female differs in having the upper part of throat unstreaked and the abdomen spotted distinctly. Western America, in N. A. west of the Rocky Mountains, casual in the Mississippi Valley and Fla.

f. Spoon-billed Ducks. Spatula.

Larger ducks with the bill greatly widened at tip. Wing coverts, blue as in e.

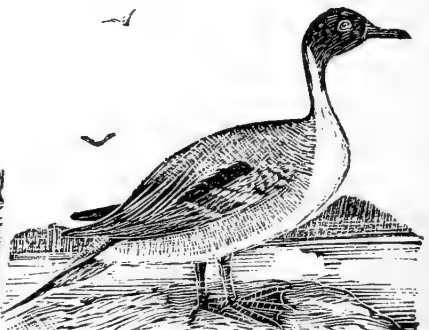
1. SHOVELLER, S. CLYPEATA. 20.00; bill, 2.50; speculum, green glossed with violet; head and upper neck, greenish; remainder of neck, breast, sides of back, and wing-band, white: under parts, chestnut; undertail coverts, black; bill, black, iris, yellow; feet, orange, fig. 148. Female, yellowish-buff, streaked, spotted and banded, more prominently above, with dusky. Northern hemisphere; in N. A. breeds from Texas to Alaska; nests, placed on the ground, eggs, 6 to 10, greenish. Migrates south in Sep. and Oct. to winter in considerable numbers from the Carolinas through the Gulf States. Comes north in April; uncommon on the Atlantic coast north of the Carolinas. Occurs in small ponds both salt and fresh in small flocks. Very unsuspicious.

Fig. 148.



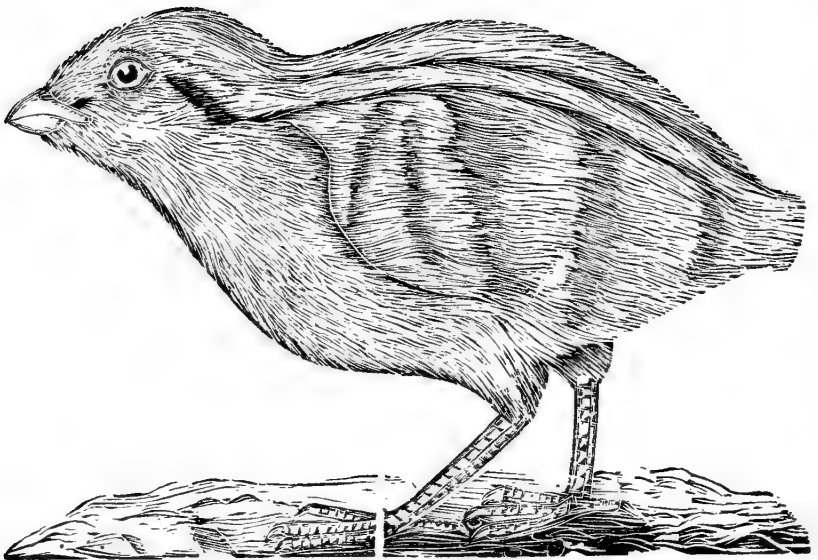
N, B, f, 1. 1-10.

Fig. 149.



N, B, g, 1. 1-10.

PLATE 12.



BOB-WHITE. YOUNG.

g. Sprig-tailed Ducks. Dafila.

Larger ducks with long necks, elongated and narrowed central tail feathers and rather narrow bills which are but slightly narrowed at tip.

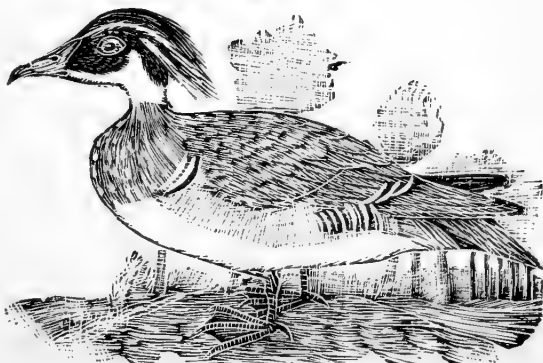
1. PINTAIL, *D. ACUTA*. 25.00; bill, 2.00; speculum, greenish with a violet iridescence; head, neck and back brown, the latter finely banded with white; two lines of white extend down sides of neck to back with a patch of black between and join the white of the lower parts; wing coverts ashy-brown, the greater tipped with reddish; bill, blackish, feet, brown. Female; speculum, gray; above, dark-brown banded, streaked and spotted with yellowish-white and rufous; beneath, yellowish-white spotted on throat, neck and under tail coverts with dusky; white wing-band in both sexes. Northern hemisphere; in N. A. breeds north of the U. S.; migrates south in Sep., Oct. and Nov. to winter from the Gulf States south to Panama when it is very abundant in Fla. frequenting the salt estuaries of the coasts and fresh waters of the interior; comes north in March; not common on the Atlantic coast north of Georgia. Nest, placed on the ground; eggs, 6 to 10, greenish-brown.

h. Arboreal Ducks. Aix.

Medium-sized ducks with conspicuous markings and crested heads, which inhabit fresh waters. All of the species are beautiful.

1. WOOD DUCK, *A. SPONSA*. 18.00; bill, 1.35.; head, Fig. 150.

green brightest on top, line over eye, one behind it, throat running upward in a triangular patch, ring around neck, and beneath, white; above, brown much glossed with greenish; breast, chestnut spotted with white; sides, buff finely banded with black



N, B. h, 1. 1-9.

with coarser black and white transverse bandings behind; white crescent in front of wing bordered behind by one of black; speculum, green and bronze bordered behind with white; iris, red; bill, pinkish; feet, brown, fig. 150. Female and young, duller with the head plain slaty-brown with throat, line at base of bill and space around eye, white; young have the breast streaked. Temperate N. A. breeding throughout its range; migrates south in Oct. to winter in the Gulf States; comes north in April. Breeds in April in Fla., in May further north; nests, placed in holes of trees: eggs, 6 to 10, pale brownish. Frequents wooded streams and small ponds, often hiding in thickets, rises suddenly and flies swiftly away usually along the course of the stream. Note when breeding, given by both sexes, a clear, long-drawn, plaintive cry, often repeated.

C. SEA DUCKS. Fuligulidae.

Sea-inhabiting ducks with the bill not often expanded at tip but somewhat so in the middle in a few genera.

a. Pochards. *Netta*.

Head, conspicuously crested; bill, not expanded; speculum, present.

1. RUFOUS-CRESTED DUCK, *N. RUFINA*. 21.00; bill, 2.00; speculum, white; head and neck, purplish-red; lower neck, stripe along hind neck, lower parts, and rump, blackish; back, brown; large patch on flanks, white; bill and feet, bright red. Female, brownish throughout; speculum, gray bordered behind with a band of brown; crest, smaller. Eastern hemisphere; accidental in eastern U. S. All dive with ease.

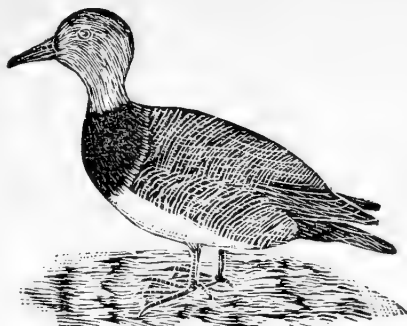
b. Bay Ducks, *Aythya*.

Differ from *a* in being without crest.

1. REDHEAD, *A. AMERICANA*. 20.00; bill, 2.00, low at base and not projected backward on forehead; speculum, bluish with the upper feathers black margined; head, and

neck for more than half its length, brownish-red tinged with violet; remainder of neck, Fig. 151.

body in front of wings and lower back, black; canvassing on back and sides with the black and white of about equal area; bill, black; feet, bluish; iris, orange, fig. 151. Female, brownish throughout with the canvassing above faintly indicated. Breeds from southern Mich. and northern Me. northward, migrating



southward in Oct. to winter from Mass. (where it is rare north of Cape Cod) southward, becoming very common from Chesapeake Bay through the Carolinas; comes north in April. Nests on ground; eggs, 6 to 10, creamy-white. Occurs in flocks or occasionally singly.

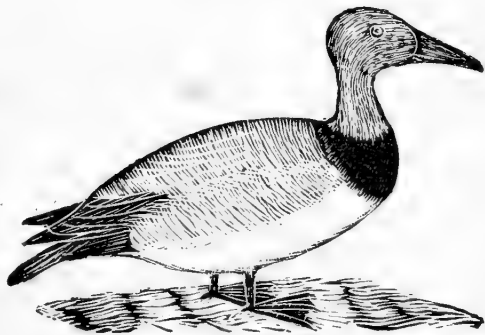
2. CANVAS-BACK. A. VALLISNERIA. Differs from 1 in being a trifle larger; bill, long and tapering, 2.75 produced back on forehead; red of neck not extending over more than half its length; canvassing with white predominating, fig. 152. Breeds from the northwestern States northward; time of migration and winter range with nesting habits about as in 1.

Fig. 152.

c. Black-headed Ducks. Fuligula.

Bill, flatter than in b and slightly expanded toward tip; head and neck, and upper breast, black.

1. SCAUP, F. MARILA. 19.00; bill, 1.80; speculum,

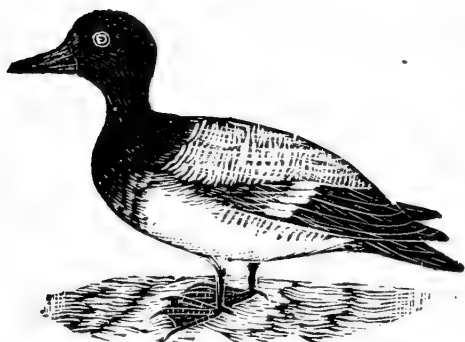


N, C, b, 2. 1-16.

white; head glossed with green and violet; space in middle

of neck slightly ringed with brownish; back and sides canvassed with about equal proportions of black and white; beneath, white; bill, blue; feet, black; iris, orange, fig. 153. Female, with black of male replaced with dark brown; white space at base of upper mandible, fig. 154. Young male, similar and all stages occur between this and adults. Breeds far north; migrates south in Oct. to winter from the coast of the middle States southward as far as Guatemala; comes north in April; common in N. E. in spring and autumn, often remaining until Dec. Often occurs in large close flocks, or rafts, and in rising flies in a close body. Usually found on salt water but are sometimes seen on fresh. Nesting habits and eggs similar to those of *b*, 1.

2. LESSER SCAUP, *F. AFFINIS*. Smaller than 1, 17.00; Fig. 153.



head without the greenish gloss, otherwise similar. Breeds a little further south and occurs in the Bahamas and West Indies in winter, but otherwise range and nesting habits similar.

N, *C*, c. 1. 1-10. the neck. Breeding habits and range, similar. Occurs more often on fresh waters than on salt and in not large flocks, but frequently singly or in pairs.

3. RING-NECKED DUCK, *F. COLLARIS*. Differs from 2 in having the speculum gray and a distinct reddish ring around

d. Black and White Ducks. *Clangula*.

Black and white ducks with short necks and narrow bills which are high at the base and not flattened.

1. AMERICAN GOLDEN-EYE, *C. AMERICANA*. 20.00; bill, 1.60; head, upper neck and back, black; round spot at base of bill, lower neck, under parts, and wing patch, white; scapularies, lance-shaped and streaked and edged with white;



PLATE 13.

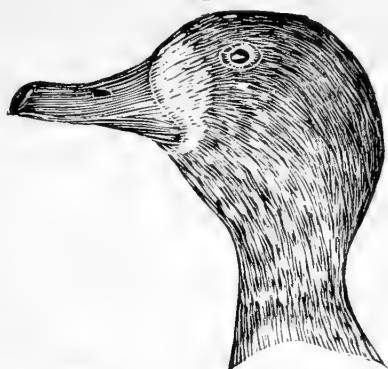


HEAD AND FOOT OF ANI.

bill, black; feet, yellow; iris, orange, fig. 155. Female and young, black replaced by

Fig. 154.

ashy brown and the feathers are edged with whitish; young males occur in all stages between this and adults but the white spot at base of bill is usually indicated. Breeds from northern Maine northward; migrates southward to winter in abundance on the coast of N. E. frequenting the open

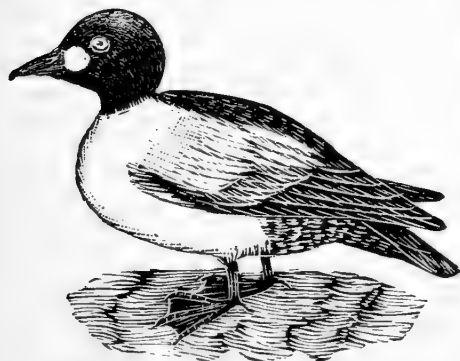


N, C. c, 1. 1-3.

water about the mouths of rivers, and southward to Cuba; goes north in April. Flies rather high even in passing over comparatively short distances, and swiftly, producing a loud whistling with its wings. Nests, placed in holes of trees; eggs, ashy-green.

2. BARROWS GOLDEN-EYE, *C. ISLANDICA*. Differs from 1 in having the bill higher at base and the white spot on head triangular in form, the green glossing is absent from head, and the scapularies are rounded at tip with a pointed projection on one or both sides. Breeds from the Gulf of St.

Fig. 155.



N, C, d, 1. 1-10.

Lawrence northward; south in winter rarely to Mass. and N. Y.

e. Dipper Ducks. *Charitonetta*.

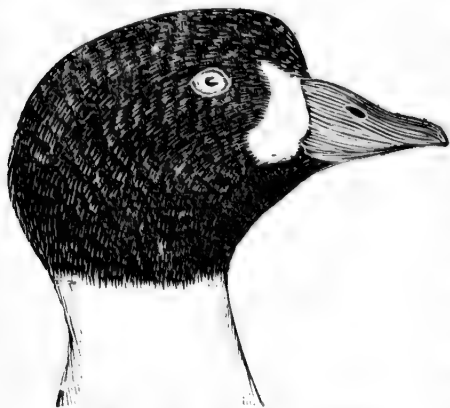
Small ducks which occur on salt water oftener than on fresh and which are expert divers. Differ from d in being smaller, in having the feathers of head elongated with a large white patch behind eye.

1. **BUFFLE-HEAD, C, ALBEOLA.** 14.00; bill, 1.15; head, upper neck, and back, black; triangular patch back of eye, broad line through wing, and beneath, white; bill, black; feet, yellow, fig. 157. Female, smoky-brown above, white below: white patch on wing and a small one back of eye and below it. Breeds from Me. northward, placing its nest in holes and cavities of trees and stumps. South in Oct. to winter from Mass. southward to Cuba. Comes north in March.

f. Long-tailed Ducks. Harelda.

Medium-sized, small-headed, short-necked ducks, mostly black in color and which change plumage in winter; bill, short and narrow.

Fig. 156.



N, C, d, 2. 1-8.

narrow ring of orange near tip; feet, bluish. Winter, differs from summer in having head, neck, upper breast, and back, white; patch of brown on side of head below one of ashy, fig. 158. Female differs in lacking the long central tail feathers, the head and neck are dusky with whitish patch around eye and on neck behind. Breeds far north throughout the northern hemisphere; migrates south in middle Oct. to winter in abundance along the coast of N. E. south to the Potomac; comes north in late April. Frequents bays along the coast keeping in close flocks from a few pairs to a hundred or more. In feeding all of a flock are apt to dive at once and reappear

1. **OLDSQUAW, H. HYEMALIS.** 18.00; bill, 1.15; summer, head, neck, breast, upper parts, and middle tail, brownish-black; sides of head and body, bluish-ash; patch behind eye, longitudinal streak on sides of occiput, under parts, and sides of tail, white; some feathers of upper parts, edged with chestnut; bill, black with

simultaneously; cries, musical and frequently given both when the birds are in flight and when sitting on the water; the notes may be rendered by "*Er-lit ah-er-lit*" varied by "*Ah-ah ah-er-lit.*" When a number are vociferating the effect produced is similar to childish, or feminine articulations uttered in an unknown tongue. Nests, placed on the ground: eggs, bluish-ash.

Fig. 157.



N. C, e, 1. 1-10.

g. Painted Ducks. *Histrionicus*:

Similar in general form to f, but lack the the long central tail feathers, and are singularly marked with white, chestnut and black.

1. HARLEQUIN DUCK, *H. HISTRIONICUS*. 16.75; bill, 1.60; blackish tinged with slaty; triangle in front of eye, spot on back of head, line on neck, two crescents on sides, and markings on back, white: line on top of head and flanks, chestnut, fig. 159. Female, ashy-brown, mottled with whitish below; whitish spot in front of eye and one of pure white on back of ear coverts. Breeds in N. A. from Newfoundland northward chiefly in the interior; comes south in Nov. to winter quite commonly in the Bay of Fundy and rarely to the coast of Mass. and southward to N. J.

h. Eiders. *Somateria*.

Large ducks which frequent the sea coast; males, black and white; females, brown; bill, rather long, provided at base with a divided, fleshy projection that extends on to the forehead.

1. AMERICAN EIDER. *S. DRESSERI*. 25.00; bill, 2.40; head, neck, and above, white; forehead, line through eye, and beneath, black; portion of head, glossed with greenish,

fig. 160. Female, reddish-brown transversely banded with dark-brown. Young male, similar to female. Breeds on the
 Fig. 159. Fig. 158.



N, C, g, 1. 1-15. N, C, f, 1. 1-15.

Atlantic coast from northern Me. to Labrador; winters from Mass. to Del. and west to the Great Lakes; comes south in late Oct.; north in April; common. but on the coast of Mass. keeps well out to sea, feeding about islands that lie well out. Nests placed on the ground near the sea; eggs, ashy-green.

1*. **NORTHERN EIDER, S. D. BOREALIS.** Differs from 1 in having the fleshy process at base of bill terminating in a point, fig. 161. Breeds in northeastern N. A. and Greenland; south in winter to coast of Mass.

i. Arctic Eiders. *Eritonetta*.

Differ from **h** in having the base of bill considerably swollen and its fleshy process greatly widened, fig. 162.

1. **KING EIDER, E. SPECTABILIS.** Differs from **h**, 1 in having the top of head bluish-ash with black reduced to a narrow line about fleshy process and spot under eye; black V-shaped mark on throat, lower back and wings, dark-brown. Breeds in the Arctic regions; in N. A. south to winter as far as northern N. E. and rarely along the coast to Ga.

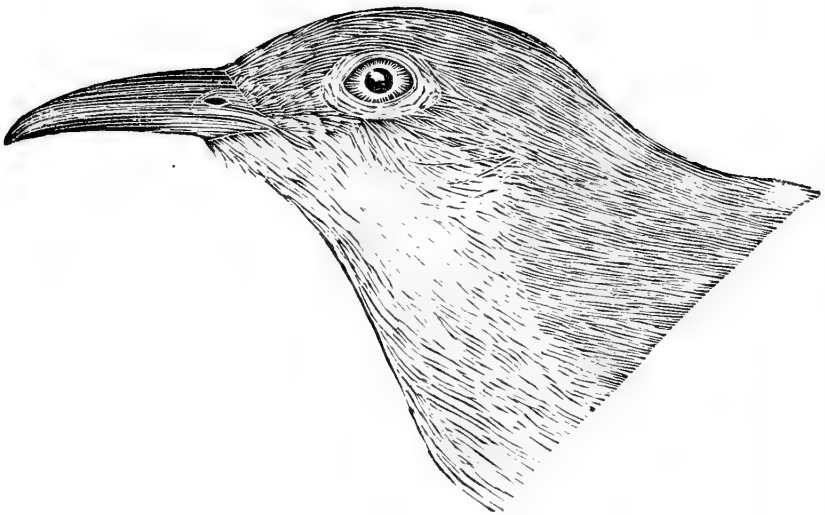
j. Black Scoters. *Oidemia*.

Base of bill slightly swollen; color wholly black.

1. **AMERICAN SCOTER, O. AMERICANA.** 19.00; bill, 1.50; base of bill orange, black terminally; feet, greenish, fig. 163. Female, dull brown, whitish on sides of head. Breeds



PLATE 14.



BLACK-BILLED CUCKOO.

in Labrador and the northern interior; migrates south in middle Oct. to winter from the coast of N. E. to Fla.; abundant;

Fig. 161.

Fig. 160.



N, C, h, 1*. 1-3.



N, C, h, 1. 1-3.

comes north in April.

k. Black and White Scoters. *Melanitta*.

Males black and both sexes have a large patch of white on wing; base of bill, considerably swollen with feathers of forehead, projecting forward, fig. 164.

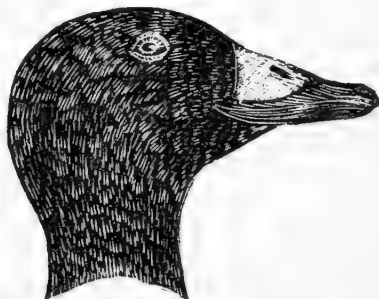
1. WHITE-WINGED SCOTER, *M. DEGLANDI*. 21.00; bill, 1.70; elongated spot under and back of eye, white; bill, red black at base and on edges; iris, yellow; feet, reddish-brown, fig. 165. Female, dull brown; circular space at base of

Fig. 162.

Fig. 163.



N, C, i, 1. 1-3.



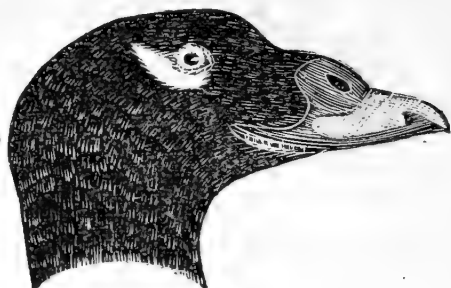
N, C, j, 1. 1-3.

bill, elongated patch back of ear and beneath, whitish. Breeding range much as in j, 1 and time of migration the same. Winters from the coast of N. E. to the Carolinas. Abundant. Nests, placed on the ground; eggs, pale brown.

2. VELVET SCOTER, *M. FUSCA*. Differs from 1 in having the feathering on base of bill less extended and the bill Fig. 164. Fig. 165.



N, C, l, 1. 1-10.



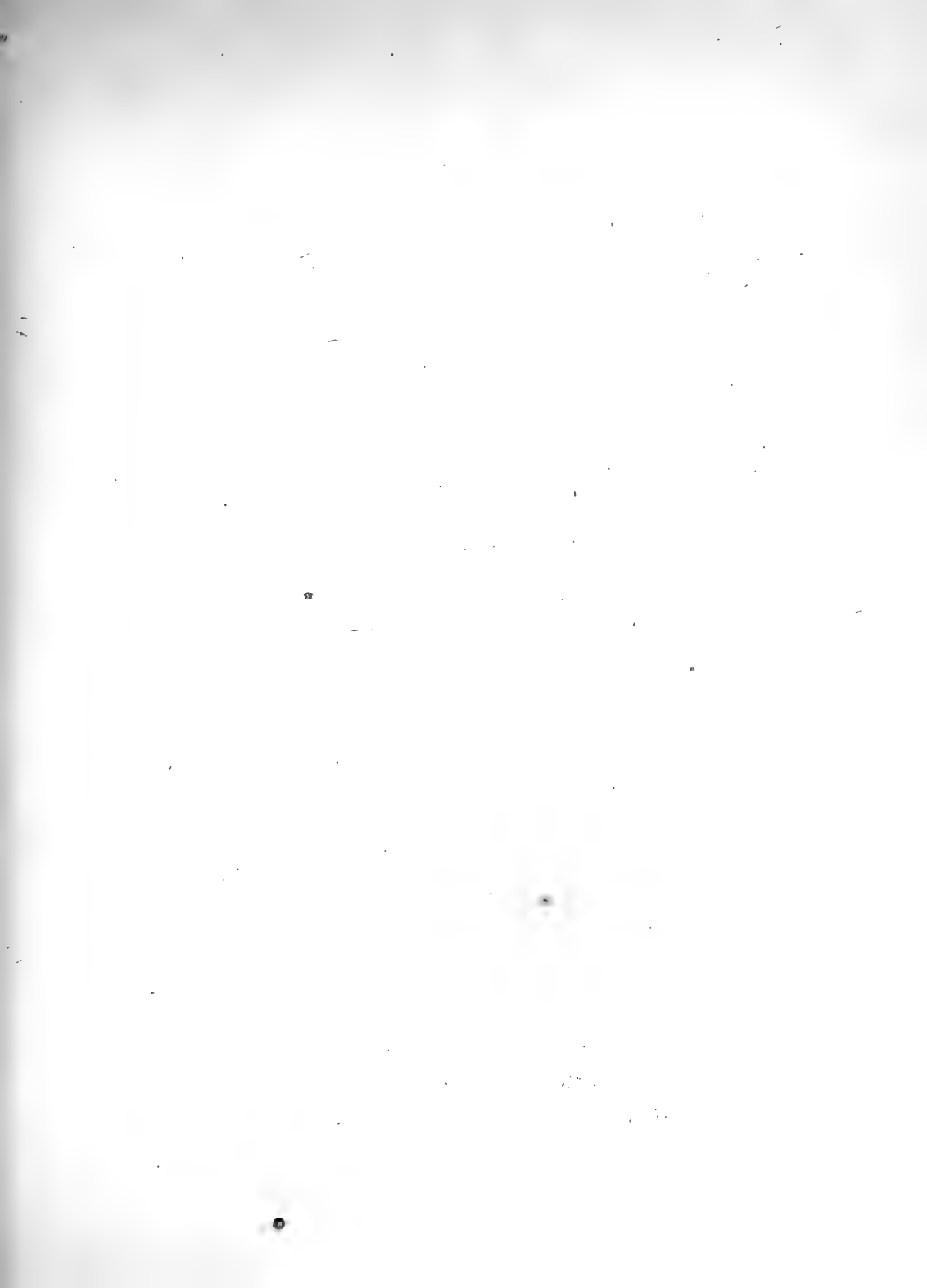
N, C, k, 1. 1-10.

is not as brightly colored. Northern Old World; accidental in Greenland.

1. White-capped Scoters. *Pelionetta*.

Black, with white markings on top of head; bill, considerably swollen at base and brightly colored.

1. SURF SCOTER, *P. PERSPICILLATA*. 20.00; bill, 1.70; white triangle on top of head, another on nape, arranged base to base; bill with square black spot at base of upper mandible margined with reddish-orange, in front of this is a bluish-white spot, followed by orange, then dusky at tip; under mandible, pinkish; iris, yellowish-white; feet, reddish-orange, fig. 164. Female, brown with whitish patch at base of bill, and on sides of head; bill, black. Range and migration, similar to k, 1, but does not breed quite as far south. Abundant. Nests, placed on the ground; eggs, greenish-buff. This and the two preceding species associate together, sometimes bedded in large flocks on the ocean and at other times in smaller numbers in bays, mouths of rivers, etc. All fly into the tide rivers to feed on mollusks which have been exposed by the falling water, and out again during flood tide. In flight small flocks often move close to the surface and usually in line, one behind the other, large flocks rise higher and move in irregular masses.





NORTHERN BLUE YELLOW-BACK.

MALE.

FEMALE.

D. STIFF-TAILED DUCKS. *Erismaturidae*.

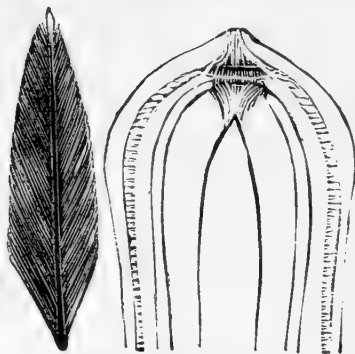
Small ducks rather brightly colored in summer but changing into duller plumage in winter; head, small; neck, large and short; tail feathers, narrowed and stiffened, fig. 166; entire plumage, closely blended.

Fig. 166.

a. Rudder Ducks.

***Erismatura*.**

Bill, slightly bent upward at tip and its nail is small and bent under; its edge is harder and finely serrated and the lower mandible is also provided with a similar edging at its tip, fig. 166, showing under side.

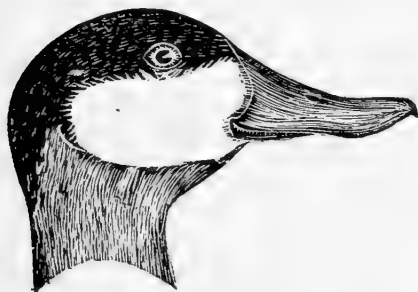


N, D, a, 1.

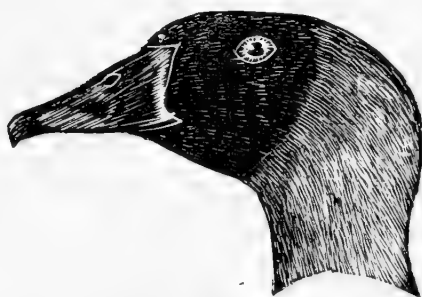
1. RUDDY DUCK, *E. RUBIDA*. 15.00; bill, 1.40; neck and upper parts, chestnut; top of head, black, sides, white; beneath, whitish transversely banded with dusky; bill and feet, ashy-blue, fig. 167. Female and winter male; chestnut replaced by reddish-brown marked with spots and wavy lines of dusky; throat and line at base of bill, whitish. Breeds locally throughout N. A. south to Guatemala; migrates south

Fig. 167.

Fig. 168.



N, D, a, 1. 1-2.



N, D, b, 1. 1-2.

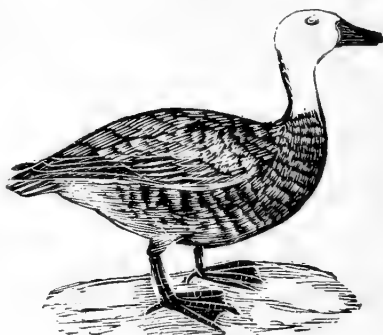
in Oct. to winter from the Carolinas to the Bahamas and West Indies; comes north in April. Common. Occurs singly or in small flocks on both salt and fresh waters but seldom on

the ocean, often on small ponds and pools. Very unsuspicious. When started flies swiftly but is apt to circle and return near the point from which it started. Nests, placed on the ground; eggs, whitish.

b. Black-faced Ducks. *Nomonyx*.

1. MASKED DUCK, *N. DOMINICUS*. 13.00; bill, 1.40; front of head, black; back of head and neck, deep reddish-brown becoming paler on the lower surface of body; white wing-patch; back, black with feathers margined with reddish; bill, bluish with a narrow stripe of black; feet, gray, fig. 168. Female, duller with top of head and two stripes on its sides, blackish. Tropical America, including some portions of the West Indies; accidental in Wis., N. Y., and Mass.

Fig. 169.



N, E, a, 1. 1-6.

E. GEESE. *Anseridae*.

Usually large birds with long necks and quite long legs well fitted for walking. Bill, rather short and high at base. Sexes, similar. Nests placed on the ground; eggs, 6 to 10, dirty-white or yellowish. Flight, heavy, direct, often in lines side by side or in V-shaped flocks. Notes loud and sonorous.

a. White Geese. *Chen*.

Greater portion of plumage either white or very light in color; bill and feet, purplish-red. Young, with head and neck grayish.

1. BLUE GOOSE, *C. CAERULESCENS*. 28.00; grayish-brown, bluish on wing coverts; head and neck, white, fig. 169. Breeds on the eastern shore of Hudson Bay; migrates south through the interior to winter on the coast of the Gulf of Mexico west of Louisiana; rare on the Atlantic coast.

2. LESSER SNOW GOOSE, *C. HYPERBOREA*. 25.00; white; primaries, black, fig. 170. Breeds in Alaska; migrates south in winter to southern Ill. and southern Cal; casual in N. E.

2*. GREATER SNOW GOOSE, *C. H. NIVALIS*. Differs from 2 in being larger, 35.00. Breeds on the eastern coast of Hudson Bay; migrates south in winter very rarely to N. E. and southward as far as Cuba; rare in U. S.

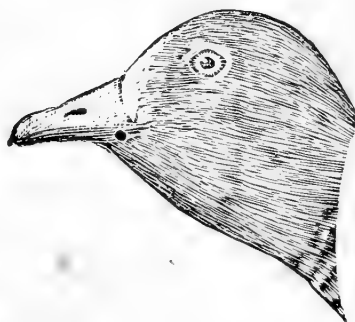
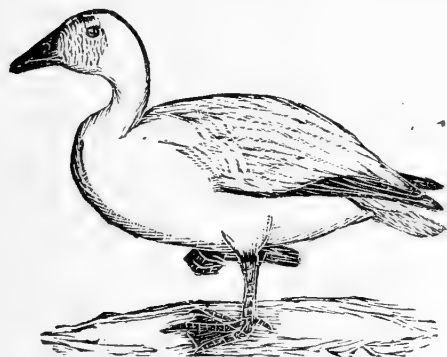
b. Gray Geese. *Anser*.

Large gray geese with both upper and under tail coverts white, and tail tipped with white.

1. AMERICAN WHITE-FRONTED GOOSE, *A. GAMBELI*. 30.00; bluish-gray above, brownish on head and neck; forehead, white; grayish-white beneath irregularly spotted on breast with black, fig. 171. Breeds far north in N. A., migrating south in Oct. to winter in abundance in the southwest as far south as Mexico; return north in March; rare on the Atlantic coast but occurs as far south as Cuba.

Fig. 170.

Fig. 171.



N, E, a, 2. 1-18.

N, E, b, 1. 1-4.

2. WHITE-FRONTED GOOSE, *A. ALBIFRONS*. A little smaller than 1 and with a considerably smaller bill. Northern parts of eastern hemisphere; accidental in Greenland.

3. BEAN GOOSE, *A. FABALIS*. Differs from 1 in the absence of white on forehead and dark mottling beneath. Northern portions of eastern hemisphere; accidental in Greenland.

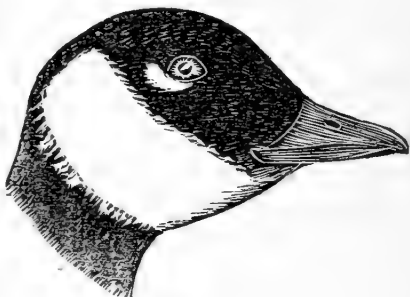
c. Short-billed Geese. *Branta*.

Rather large geese, dark above, lighter beneath; head and neck, conspicuously marked with black and white; bill, short and black; feet, black.

1. CANADA GOOSE, *B. CANADENSIS*. 40.00; tail feathers, 18 to 20 in number; head

and neck, black; white patch on cheeks usually meeting on throat; brownish-gray above, lighter below; uppertail coverts and posterior portions below, white, fig. 172. Breeds in northern U. S. and British Provinces; migrates south in early Nov. to winter from Chesapeake Bay

Fig. 172.

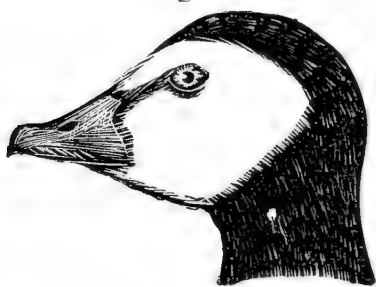


N, E, c, 1. 1-4. south to Fla. and Mexico; returns north in March. Abundant.

2. HUTCHINS' GOOSE, *B. HUTCHINSII*. Much smaller than 1, 32.00. Breeds in Arctic N. A.; migrates south in Oct. through western U. S. and Mississippi Valley to winter from Kansas southward; returns north in March.

3. CACKLING GOOSE, *B. MINIMA*. Differs from 2 in being smaller, 24.00; tail feathers, 14 to 16; distinct white collar on lower neck; nearly or quite as dark below as above. Breeds on the northern Pacific coast; migrates south in winter into western U. S.; rarely east to Wis.

Fig. 173.

**N, E, c, 4. 1-4.**

4. BARNACLE GOOSE, *B. LEUCOPSIS*. 26.00; fore part of head, white; space in front of eye, occiput, neck and chest, black; bluish-gray above somewhat banded with black and white; grayish-white beneath, fig. 173. Northern parts of Old World; casual in eastern N. A.

5. BRANT, *B. BERNICLA*. No white on head, neck with a patch of white streaks on sides of middle; brownish-gray above; pale gray beneath, fig. 174. Breeds in the Arctic regions; in N. A. chiefly on the Atlantic coast: migrate south in Oct. and Nov. to winter in southern U. S.; return north in April; occur chiefly on the coast or out at sea in migration.

Fig. 174.



6. BLACK BRANT, *B. NIGRICANS*. Differs from 5 in being a little smaller, in having the white on neck extended across the front, and in being considerably darker beneath. Breeds in Arctic N. A. migrating south through the west and wintering as far south as Lower California; casual on the Atlantic coast.

N, E, c, 5. 1-4.

b. Tree Ducks. *Dendrocygna*.

Medium sized, duck like birds with long legs and striking colors, reddish-brown, chestnut, and black. Eggs, 10 to 15, yellowish or pale greenish.

1. FULVOUS TREE DUCK, *D. FULVA*. 21.00; head, neck, and below, light cinnamon; back, black with the feathers tipped with cinnamon; bill, black. Southern border of U. S. from La. westward and southward to Mexico; casual in N. C.

F. SWANS. *Cygnidae*.

Large birds with neck longer than body; swim with ease and have the power of elevating the enlarged secondaries which serve as sails; fly with great swiftness, when migrating moving high in air, often in V-shaped flocks; cries, loud and harsh. Colors, white, black and white, or wholly black.

a. White Swans. *Olor*.

Pure white; bill and feet, black; young, tinged with brownish on head and neck; bill and feet lighter. Nests, placed on the ground; eggs, 3 to 5, white or buff. Usually frequent inland waters both salt and fresh.

1 WHOOPING SWAN, *O. CYGNUS*. 60.00; basal portion of bill, including nostrils, yellow; nostrils, in center of bill. Northern parts of eastern hemisphere; occasional in southern Greenland.

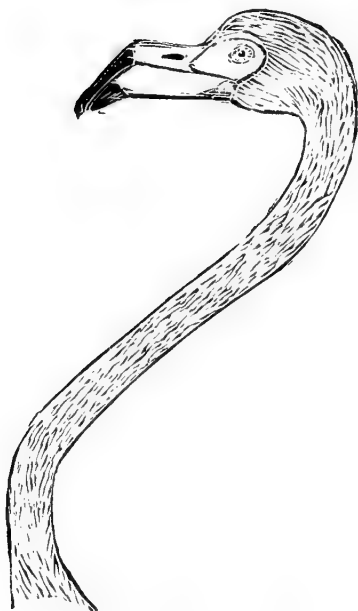
2. WHISTLING SWAN, *O. COLUMBIANUS*. Differs from 1 in being a little smaller and having only a small spot of yellow at base of bill. Breeds far north migrating south in autumn to winter from the Chesapeake to the Gulf coast; very rare on the Atlantic coast north of Maryland.

3. TRUMPETER SWAN, *O. BUCCINATOR*. Larger, 65.00; bill, wholly black with nostrils nearer base; tail feathers, usually 24. Breeds in the interior of N. A. from Iowa northward; casual on the Atlantic coast.

O. NAIL-BILLED WADERS.

Odontoglossae.

Large birds with very long necks and legs, webbed toes, and bill abruptly bent in the middle; partly or wholly scarlet. Frequent islands and seaboard in the tropics or subtropics. Cries, sonorous and goose-like. Flight, rapid and direct with rather slow wing-beats, and with outstretched neck and legs. Nests built of marl piled in the form of a truncated pyramid; eggs 1 sometimes 2, greenish covered with a chalky incrustation. Young helpless and fed by regurgitation. Food small mollusks which are procured from the bottom of the water by immersing the head and inverting it so that the upper mandible is underneath.



O, A, a, 1. 1-9.

A. FLAMINGOES. *Phoenicopteridae*.

Characters as above.

a. Flamingoes. *Phoenicopterus*.

Characters as above.

1. AMERICAN FLAMINGO, *P. RUBER*. 45.00; scarlet; primaries, black, fig. 175. Young, grayish-white more or less mottled with darker gray. Nestlings, wholly white. Breeds in southern Fla., the Bahamas, West Indies and Atlantic coast of Tropical America.

**P. GROUSE, QUAILS, ETC.
Phasiani.**

Birds of varying size with feet fitted for walking; bills hard, adapted for gathering seeds and other vegetable matter and insects. Eggs, many, placed on the ground in rudely constructed nests; young active when hatched and covered with down and capable of feeding themselves. All run rapidly, often hiding when alarmed to rise suddenly when approached closely.

A. PARTRIDGES. *Perdicidae*.

Small or medium sized birds with rather short, rounded wings and short tails. Sexes, not similar. Fly well for short distances, usually moving in a straight line with quick wing-beats.

a. Bob-whites. *Colinus*.

Rather plainly marked birds with the feathers of head only slightly elongated. Young, unable to fly until well grown. Frequent the open country. Eggs, white. Not migratory. Social, congregating in flocks of from 10 to 20 or more.

1. BOB-WHITE, *C. VIRGINIANUS*. 10.00; above, chestnut marked with ashy, buff, and dark brown; forehead, line over eye, and throat, white; patch on neck extending on either side to bill, black; beneath, creamy streaked on upper breast and sides with chestnut; iris, bill, and feet, brown, fig. 176.

Female differs in having the white about head replaced by buff. Downy young, buff streaked with dark-brown, plate 12. Note, "*Bob-white*" or "*More-wet*", sometimes "*No-more-wet*"; also a chuckling when disturbed and a call when a bevy is separated. Eastern U. S. from southern Me. to Fla.

Fig. 176.



1*. FLORIDA BOB-WHITE, C. V. FLORIDANUS. Smaller with larger bill and feet; darker with black of breast considerably extended over upper breast. Florida.

B. GROUSE. Tetronidae. P, A, a, 1. 1-10.

Larger birds with feathers of head considerably elongated and crest-like; tarsi, feathered, naked colored space over eye; toes, with fringe-like scales on the sides. Rise on the wing with a rapid whirring sound and fly swiftly with quick wing-beats but usually in a straight line, often sailing with outstretched wings before alighting. Run swiftly when down. Nests on the ground, eggs buffy, sometimes spotted.

a. Spruce Grouse. Canachites.

Rather small grouse with moderately long tails and dark colors; naked space over and around eye, red; toes, slightly webbed and these are feathered. Eggs, spotted.

1. CANADA GROUSE, C. CANADENSIS. 15.50; black, banded above with ashy and chestnut and blotched and banded below with white; terminal band on tail, chestnut, fig. 177. Female duller with much of the black replaced by chestnut, especially on the breast. Young, much more reddish. British America east of the Rocky Mountains and into the U. S. in the northern portions of Minn., Mich., N. Y., and N. E. Very unsuspicious birds inhabiting the coniferous forests.

b. Wood Grouse. Bonasa.

Larger birds with longer tails and prominent ruffs of black feathers on sides of neck which are rounded terminally. The young acquire their wing feathers when only a few days old and fly quite well when half grown.

RUFFED GROUSE, B. UMBELLUS. 18.00; reddish-brown above mottled and spotted with dark-brown and ashy-white; reddish-brown band across breast; remaining under parts, white banded with brown; tail, tipped with ashy in which there is a sub-terminal band of brown, fig. 178. Female duller with a smaller tail. Eastern U. S. south to the mountains of northern Ga., and southern Canada. Frequents brushy woodlands. Note, a whistling chuckle given when alarmed; also give the drumming sound in spring, summer and autumn; this begins loud and distinct, increases in rapidity, but diminishes in volume and dies away almost as a continuous murmur. Has the habit of spreading the fan-like tail and turning it from side to side to attract attention to itself when accompanied by its young. Nests in early May.

Fig. 177.



1*. CANADIAN RUFFED GROUSE, B. U. TOGATA. Differs from 1 in being grayer above especially on tail and in having the brown markings broader. Inhab-

Fig. 178.



P, B, a, 1. 1-12.

its the spruce forests of northern N. E., northern N. Y. and the British Provinces north to James Bay, west to Oregon and British Columbia.

**c. Ptarmigans.
Lagopus.**

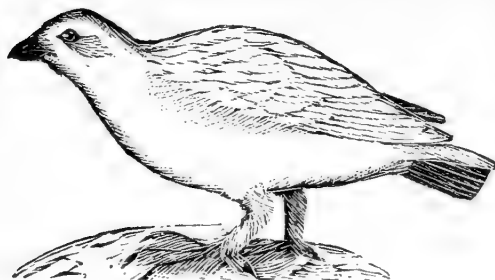
Medium sized, compactly formed grouse that inhabit cold regions and

P, B, b, 1. 1-12.

which are nearly white in winter, fig. 179, but change to a

brown dress in summer, fig. 180; entire feet, thickly feathered; upper tail coverts elongated, sometimes as long, or longer than tail. Tail, in all of our species, black.

Fig. 179.

**P, B, c, 1.** 1-8.

and finely banded across breast and on sides with black. Breeds in Arctic and sub-Arctic regions, in America south to Sitka and the British Provinces; accidental in N. E. (Me. and Mass.).

1*. ALLEN'S PTARMIGAN, *L. L. ALLENI*. Shafts of secondaries, black; primaries, more or less blotched with dusky. Newfoundland.

2. ROCK PTARMIGAN, *L. RUPESTRIS*. 14.00; bill, small and slender; lores, black. Summer dress; grayish above, coarsely and irregularly banded and mottled with black; top of head, blackish, feathers tipped with reddish; sides of head and throat mixed white and dusky; upper breast and sides, brownish, barred with dusky; remaining under parts, white. Arctic America south to Alaska, Labrador, and the Gulf of St. Lawrence.

2*. REINHARDT'S

PTARMIGAN, *L. R. REINHARDI*. Differs from 2 in summer in being less regularly and more coarsely banded above, where the black predominates, varied with pale grayish-buff. Greenland, western shores of Cumberland Gulf, and northern Labrador.

Fig. 180.

**P, B, c, 1.** 1-8.

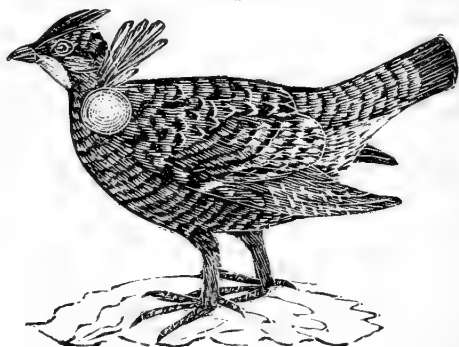
3. WELCH'S PTARMIGAN, *L. WELCHI*. Differs from 2* in summer in being darker above where many feathers are tipped with white; head, neck, upper breast, and sides, rather coarsely banded with black, grayish-white, and grayish-buff; throat, white. Newfoundland.

d. Prairie Grouse. *Tympanuchus*.

Rather large, strongly built grouse, light colored, but banded with dusky; wings, long, tail, short; feathers of sides of upper neck, elongated into an erectable tuft, beneath which is a naked space capable of expansion. Inhabit prairies or brushy plains. Notes in the breeding season a loud booming given by the male when strutting with uplifted neck plumes and extended pouches.

1. PRAIRIE HEN, *T. AMERICANUS*. 18.50; yellowish and buffy above and on throat; white beneath; throat, without bands, fig. 181; feathers of neck tuft, rounded at tips, fig. 182. Prairies of Mich. and westward.

Fig. 181.



2. HEATH HEN, *T. CUPIDO*. Differs from 1 in having the brown bandings broader and the tips of the feathers of the neck tufts pointed, fig. 183. Martha's Vineyard, Mass.

P, B, d, 1. 1-8.

e. Sharp-tailed Grouse. *Pedioecetes*.

Differs from d in the absence of neck tufts, in being more irregularly banded and spotted above where there are large rounded white spots on wings; white beneath with V-shaped marks of dusky. Inhabit similar regions.

1. PRAIRIE SHARP-TAILED GROUSE, *P. CAMPESTRIS*. 17.00; quite rusty above. Great Plains of the U. S. east to Wis. and northern Ill.

C. TURKEYS. Meleagridae.

Large birds with naked heads and necks with a tuft of
 Fig. 182. black bristles depending from upper breast; tail, long and fan-like;
 Fig. 183. tarsus, furnished with a spur.

**a. Turkeys. Meleagris.**

Feathers, more or less iridescent.

1. WILD TURKEY, *M. GAL-
LIPAVO*. 45.00; differs from the
dark form of the well known do-

P, B, d, 1. mestic turkey in being rather more **P, B, d, 2.**
brilliant in the iridescent tints and in having the feet red-
dish. U. S. from Chesapeake Bay to the Gulf Coast and west
to the plains.

1*. FLORIDA TURKEY, *M. G. OSCEOLA*. Darker than
1 with little white on wings, this when present appears as de-
tached bars which are narrow and broken, not reaching the
shaft of the feather. Southern Fla.

Q. PIGEONS. Columbæ.

Birds of varying size with long wings and well developed
tails; bill, weak and with a soft, naked space above nostrils.
Flight, rapid and direct with quick wing-beats. Eggs 2,
white, placed in stick-built nests often in trees but sometimes
on the ground or rocky shelves of caves; young hatched help-
less and naked and are fed by regurgitation. Inhabit all sec-
tions of temperate and tropical zones. Food, vegetable sub-
stances.

A. DOVES. Columbidae.

Tail feathers, 12 or 14; tarsus, slightly feathered in front.
Birds of wide distribution.

a. Pigeons. Columba.

Rather large with short or rounded tails; colors, dull.

1. WHITE-CROWNED PIGEON, *C. LEUCOCEPHALA*.
13.00; dark slaty-blue; top of head, white; sides and lower
portions of neck, iridescent with greenish and gold and each

feather is margined with black. Bahamas, and some of the West Indies; rather uncommon on the Fla. Keys. Notes, given in a minor key much those of some owls; "*Wof, wof, wo, co-woo*"; the first three notes are repeated several times, then the last is long drawn out. Social, occurring in flocks and breeding in communities.

b. Long-tailed Pigeons. *Ectopistes*.

Medium-sized pigeons with long pointed tails that are conspicuously marked with white.

1. PASSENGER PIGEON, *E. MIGRATORIUS*. 16.50; upper parts, head, neck, and sides, ashy-blue; beneath, purplish-red; under tail coverts and tip of tail, white; sides, and back of neck iridescent with violet, green, and gold, fig. 184. Breeding range now restricted to portions of the Canadas and the northern border of middle U. S. but formerly ranged through eastern N. A. from Hudson Bay southward. Alarm note, a kind of laughing coo. Very social, occurring in large flocks and breeding in communities.

Fig. 184.



c. Spotted Doves. *Zenaidura*.

Generally similar to b but with bill **Q**, A, b, 1. 1-8. more slender and conspicuously spotted on secondaries with black.

1. MOURNING DOVE, *Z. MACROURA*. 12.00; reddish-brown above under tinted with bluish; purplish-red beneath becoming lighter behind and ashy-blue on sides; tail, excepting central feathers, broadly tipped with white and crossed above this by a black band; spot on sides of upper neck, black; below it an iridescent patch of purple and gold, fig. 185; female, duller; tail, shorter. N. A. from southern Maine and

Canada south to Panama; not common on the Bahamas; local in distribution. Social but not during the breeding season and never congregating in very large flocks. Breeds in late June. Flight, swift and direct and when rising the wings produce a whistling sound. Note, a mournful double coo. Feeds on the ground, but a flock will often sit together side by side on the branches of a tree,

Fig. 185.



d. Short-tailed Doves. *Zenaida*.

Rather compactly formed, medium sized doves with short rounded tails.

1. ZENAIDA DOVE, *Z. ZENAIDA*. 11.00; yellowish-red above overwashed

Q, A, c, 1. 1-8. with ashy; a narrow white wing-band; beneath and on sides of head and neck, reddish-brown becoming bluish on sides, flanks and under tail coverts; small bluish-black spot behind eye and a larger one on side of neck where there is an iridescent patch of purple and green. Common on the Bahamas and in some of the West Indies; rare on the Fla. Keys. Not at all social, rarely, if ever occurring even in small flocks; lives most of the time on the ground. The coo consists of two notes, the first uttered with a falling inflection, the second follows quickly, but is not as prolonged, then "Who, who, who" with a decided pause between the first two; all are loud, but in a minor key.

e. Little Doves. *Columbigallina*.

Very small doves with short tails and slender bills that live mostly on the ground.

1. GROUND DOVE, *C. PASSERINA*. 7.00; brownish-ash above with inner portion of wings spotted with black having a violet iridescence; under portion of wing, showing in flight, chestnut; beneath, purplish-red with breast obscurely spotted with dusky; bill, orange black at tip, fig. 186. Female, somewhat duller. South Atlantic and Gulf States. Note, a loud "Who" often repeated, always in a minor tone. Ordina-

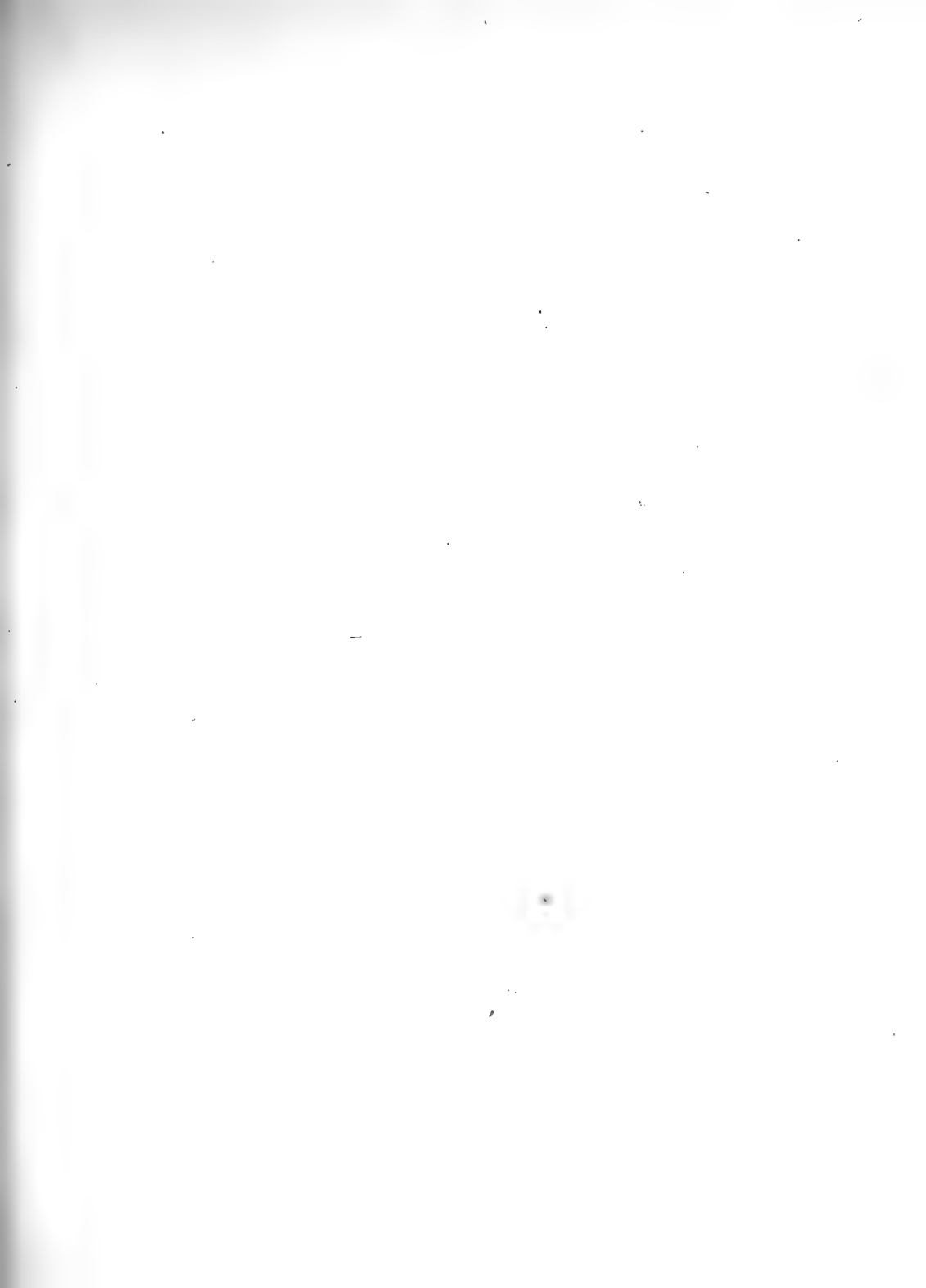
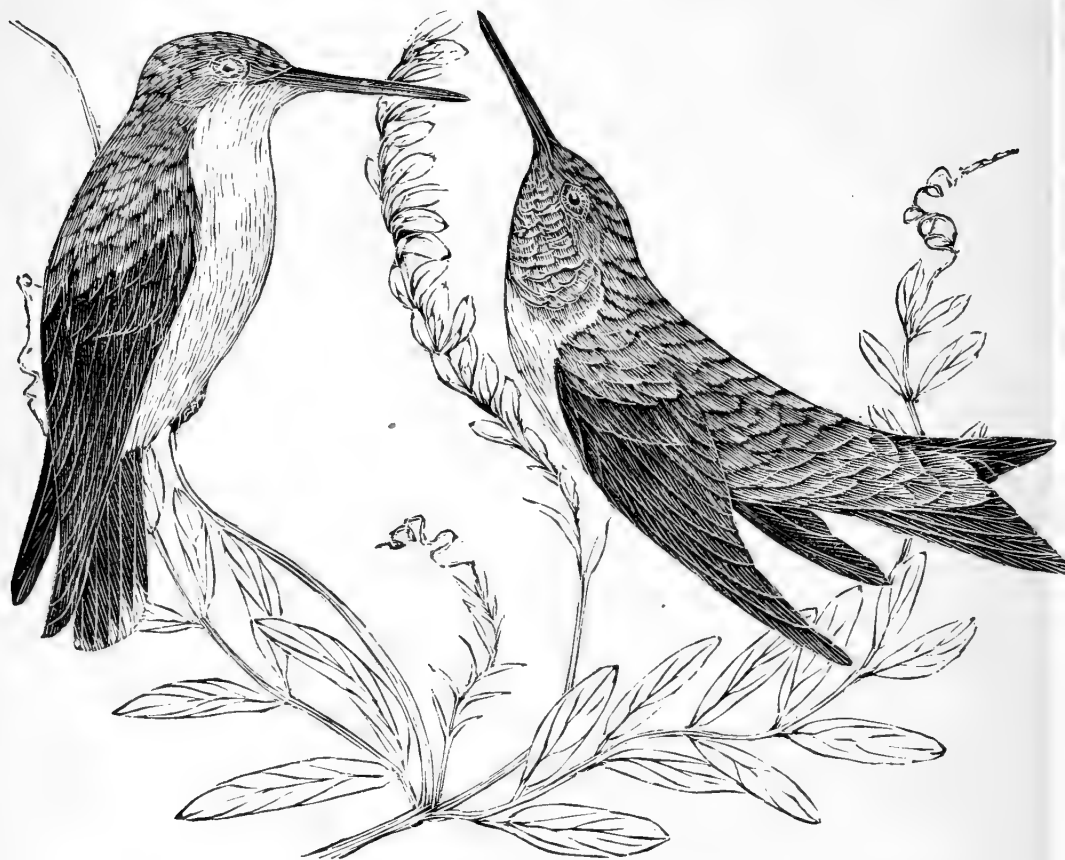


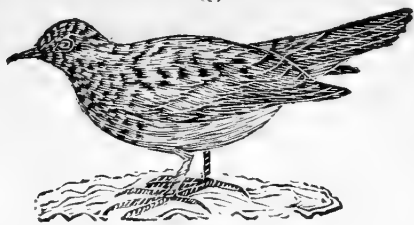
PLATE 16.



RUBY-THROATED HUMMINGBIRD.

ry flight when among the thickets which it frequents, flitting, but when passing over wider spaces direct and rapid. Very common.

Fig. 186.



2. BAHAMA GROUND DOVE, *C. BAHAMENSIS*.

Differs from 1 in being somewhat smaller and paler; bill, nearly black. Bahamas; accidental in Fla.

Q, A, e, 1. 1-3.

f. Quail Doves. *Geotrygon*.

Medium-sized doves with short tails and large feet.

1. KEY WEST QUAIL DOVE, *G. CHRYSEA*. 11.00; dull chestnut, purplish-red beneath, whitish behind; glossed above with metallic purple and bronze; broad stripe on lower jaw and throat, whitish. Bahamas, and some of the West Indies; casual in summer on the Fla. Keys. Notes, loud, long drawn, and particularly mournful. Keep well in the scrub seldom appearing in open places; run swiftly on the ground.

2. RUDDY QUAIL DOVE, *G. MONTANA*. Differs from 1 in being without the brilliant metallic gloss above, this being only slightly indicated; the jaw stripe, throat and lower parts behind are buffy; above, purplish-red; yellowish buff on breast. Tropical America; accidental on Key West, Fla.

g. Partridge Doves. *Starnoenas*.

Medium sized, ground inhabiting doves with short rounded tails and wings; form, robust and partridge-like.

1. BLUE-HEADED PARTRIDGE DOVE. *S. CYANOCEPHALA*. 12.00; deep-brown above, more reddish beneath; head, black; crown, bluish; line on side of head beneath eye and one bordering throat, white. Cuba, casual on the Fla. Keys.

R. AMERICAN VULTURES. Sarcorhamphi.

Large birds with naked heads, large wings fitted for strong flight; feet adapted for walking, not for grasping; food, usually animal matter found dead and sometimes partially decayed. Sexes, similar.

A. DUSKY VULTURES. Cathartidae.

Dusky throughout with no prominent white markings; neck without spinal ruff of elongated feathers. (Note :- the small figs.* representing birds in silhouette with extended wings are flight contours as seen from below, see fig. 187*etc.)

a. Naked-breasted Vultures. Cathartes.

Bill, short and thick; nostrils, open; tail, long and round ed, upper breast, naked, but concealed by elongated feathers on its sides. Eggs, 2, whitish mottled with brown; young, covered with whitish down.

1. TURKEY VULTURE, C. AURA. 27.50; dark-brown with a slight bluish iridescence; head, a livid red, fig. 187, America, from N. J., the Ohio Valley, and Saskatchewan southward through a portion of the Bahamas and West Indies to Patagonia; casual in N. E. Flight, steady, with long sweeping curves, sailing most of the time without flapping, sometimes at a considerable height where it moves in wide circles. Food, mainly freshly killed animals. Incapable of producing any vocal sound save a kind of hiss. Social, gathering in large flocks during the day and resting together in larger numbers during the night.

Fig. 187.



R, A, a, 1. 1-12.

b. Square-tailed Vultures.

Catharista.

Bill, long and slender; nostrils, closed by a flap of skin; tail, short and square; breast, feathered.

Fig. 187*.



1. BLACK VULTURE, C. ATRATA.

26.00; black, including head; space on primaries beneath, showing in flight, whitish, figs. 188, 188*. N. C. to Fla. north to the lower Ohio Valley, west to the Great Plains, south to Mexico, some of the West Indies and over most of South America; casual in N. E. and N. Y. Flight, by alternate flapping and sailing with rapid wing-beats, sometimes ascends to a considerable height but moves in comparatively small circles. Food, largely decaying animal matter. Rather more social than a, 1.

S. HAWKS, EAGLES, Etc.

Falcones.

Birds of varying sizes with strongly curved and hooked bills; feet, with strong claws capable of grasping. Young, covered with down when hatched but helpless and fed by their parents. Females, larger than males.

Fig. 188.

Fig. 189.

Fig. 190.



R, A, b, 1. 1-12. S, A, b, 1. 1-8.

S, A, a, 1. 1-8.

A. KITES. *Milvidae*.

Birds of prey of varying sizes and forms but which usually capture living animals for food by swooping suddenly upon them from above.

a. Fork-tailed Kites. *Elanoides*.

Rather large birds with quite small bills which do not have the upper mandible lobed; tarsus short and nearly naked; tail, long and deeply forked, fig. 190, 190*. Sexes similar.

Fig. 188*.

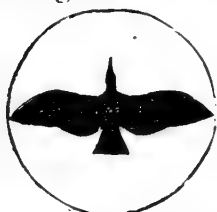
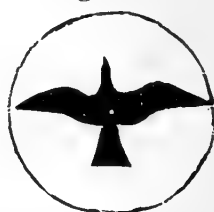


Fig. 190*.



Fig. 189*.



1. SWALLOW-TAILED KITE, *E. FORFICATUS*. 22.00; black above; head, neck, and lower parts, white. Breeds in the U. S. from the Carolinas and Minn. southward, in May; migrates southward in Oct. to winter in South America; comes north in April; casual in southern N. E. (Mass.). Flight, swallow-like, very graceful and easy. Food, largely snakes and other reptiles, which it catches by swooping downward and, grasping them with its claws, eats them as it flies. Nests, placed in trees, eggs, 4 to 6, greenish-white spotted and blotched with brown and umber, fig. 190.

b. Prairie Kites. *Ictinia*.

Compact birds with a short, broad bill, cutting edge of upper mandible lobed: wings, long; tail, but little emarginate. Sexes, similar.

1. MISSISSIPPI KITE, *I. MISSISSIPPIENSIS*. 14.00; head, neck, and beneath, bluish-ash; black above glossed with greenish; longitudinal stripe in each primary, showing in flight, bright chestnut; a wing bar of whitish, fig. 189. Southern U. S. from S. C. and casually from Penn., Wis., and Iowa southward. Winters in Guatemala.

c. Black and White Kites. *Elanus*.

Bill, short; wings, long; tail, short and square.

1. WHITE-TAILED KITE, *E. LEUCURUS*. 16.00; head, neck, tail, and beneath, white; above with central tail feathers, ashy-gray; patch on bend of wing, black. Breeds in southern U. S. from S. C. and southern Ill. to Tex. and Cal.; winters in South America: casual in Mich.

d. Curve-billed Kites. *Rostrhamus*.

Rather large, slender kites with well-curved bills, long wings, and nearly square tails.

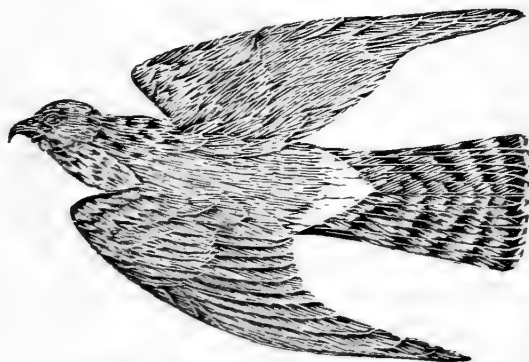
1. EVERGLADE KITE, *R. SOCIABILIS*. 17.00: ashy-black above, brown beneath; base of tail and its coverts, white, fig. 191. Female browner above and much marked with reddish below. Breeds in Fla., Cuba, and southward into eastern South America. Nests placed in low bushes in Fla. in March; eggs, 1 or 2, bluish-white spotted and blotched with brown of varying shades. Flies low over marshes with rather slow wing-beats and erratic movements. Food, largely fresh-water mollusks.

Fig. 191.



S, A, d, 1. 1-8.

Fig. 192.



S, A, e, 1. 1-6.

e. Harriers. *Circus*.

Slender birds with long wings, legs and tail; lower portion of face surrounded by a ruff.

1. MARSH HAWK, *C. HUDSONIUS*. 23.00; above, bluish-ash; upper tail coverts, white; beneath, white spotted with pale reddish, fig. 192. Female and young, brown above, reddish beneath spotted with dark-brown. Breeds throughout N. A., nesting in marshy places in May; migrates south in early Nov. to winter from the Carolinas southward to Panama rarely as far north as Mass.; comes north in April. Flies low over fields and marshes, moving with an irregular flight with rather slow wing-beats. Food, mice, frogs, snakes and lizards. Common.

B. FALCONS. *Falconidae*.

Birds of varying size having long, pointed wings, tails of medium length; cutting edge of lower mandible, toothed; lower, notched.

a. Gyrfalcons. *Hierofalco*.

Large falcons often white with some dark bandings but with no special dark markings about head; breeds in northern latitudes. Nests on cliffs.

1. WHITE GYRFALCON, *H. ISLANDUS*. 22.00; white somewhat banded on back with dusky, fig. 193. Young, more or less streaked below with dusky. Arctic regions, wandering south in winter to Labrador and northern Me.

2. GRAY GYRFALCON, *H. RUSTICOLUS*. Dusky throughout much streaked on head and barred on tail with whitish, these bars being nearly as wide as the dark interspaces; banded elsewhere above with pale grayish or buffy, and streaked beneath with the same. Young, with streakings beneath narrower and the upper parts are spotted with whitish or light buffy. Arctic regions straggling southward in winter.

2*. GYRFALCON, *H. R. GYRFALCO*. Darker than 2, with very few whitish markings on head; light tail bands narrower and darker and bluish gray; bandings above, indistinct and streakings below broader than light interspaces; much banded with dusky on flanks and thighs. Young even

darker. Northern Europe, Greenland and Arctic America south to northern Labrador; rare in winter in Mass. and R. I.

2**. BLACK GYRFALCON, *H. G. OBSOLETUS*. Much darker than 2*. with the light interspaces below narrower than the dark, sometimes nearly obsolete; above, nearly uniform dusky. Labrador, south in winter rarely to Canada, Me., Mass., and N. Y.

b. Noble Falcons. *Rhynchodon*.

Smaller than a, dark above and whitish below more or less banded on both surfaces with dark-brown; young without bands above and streaked below; black patch on side of head.

Fig. 193.



Fig. 194.



Fig. 195.



S, B, a, 1. 1-6. **S, B, b, 1.** 1-6. **S, B, c, 1.** 1-6.

1. DUCK HAWK, *R. ANATUM*. 18.00; dark slaty above, top of head, black; creamy-white below transversely banded behind only, fig. 194. Young, dark-brown above, reddish-white below. N. A., breeding locally throughout the U. S., nesting usually on cliffs; migrates south in Sep. and Oct. to winter from Fla. southward into South America. Flight, swift with rapid wing-beats, seldom sailing. Captures its prey, usually birds, on the wing. Eggs, 3 or 4, creamy-white very thickly mottled with dark-brown. Not very common.

c. Merlins. Aesalon.

Smaller than b, not banded above but streaked below and with hind neck with light streakings; no dark chest patch.

1. PIGEON HAWK, *A. COLUMBARIUS*. 11.50; dark slaty above, lighter on tail; back streaked with narrow lines of black; beneath, pale buff quite heavily streaked with dark-brown; tail, ashy-white at tip, and crossed with about four bands of the same; wings banded on inner webs with whitish, conspicuous in flight, fig. 195. Female and young, browner above and more reddish below. Breeds from the northern border of the U. S. northward, placing its nest either in the branches of a tree or in a cavity in rocks or a tree; migrates south in Sep. and early Oct. to winter in northern S. A.; north in late March and early April. Common.

2. RICHARDSON'S MERLIN, *A. RICHARDSONII*. Differs from 1 in having the tail crossed by five or six light bands and both outer and inner webs of primaries banded with light spots. Western N. A. from the Mississippi River to the Pacific.

3. MERLIN, *A. REGULUS*. Differs from 1 in having the streakings on cheeks crowded into a patch, and in having the tail of male crossed by six light bands, female by eight. Europe, Asia, and Africa; accidental in Greenland.

d. Sparrow Hawks. Tinnunculu .

Small hawks marked with chestnut and with two triangular black marks on sides of head; young scarcely different from the adults; nests placed in holes of trees or in cavities of rocks or buildings; eggs, 4 to 6, buff thickly spotted with reddish.

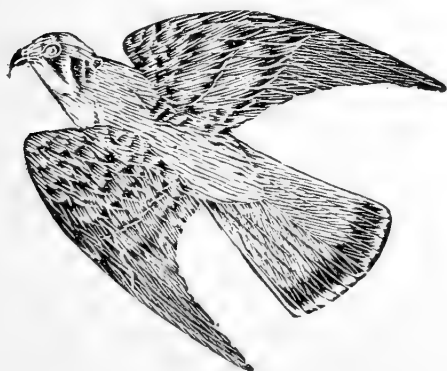
1. AMERICAN SPARROW HAWK, *T. SPARVERIUS*. 10.00; chestnut above, lighter below; top of head and wings, bluish, center of former usually chestnut; spot on occiput, bands on back, sub-terminal band on tail (it is tipped with ashy-white), spots on wings above and below, and round spots below, black; primaries, black, banded with white; throat

and sides of head, white, fig. 196. The female is heavily banded above with dusky and streaked below with brown. Breeds throughout N. A. east of the Rocky Mountains in May; migrates south in Oct. to winter from Mass. southward: north in April. [Note:- a pair of Sparrow Hawks nested in the summer of 1905 in a bird box near the house of one of my neighbors in West Newton, Mass. and in 1903 in a hole in the eaves of the house of another neighbor, where a brood of four young were reared. All through the last winter, 1906-07 the birds have constantly visited the nesting site, and on several occasions I have seen them enter the hole; once all six came and went in one after the other. My neighbor, Mr. Ohlsen, kindly presented me with one of the young, but it escaped after I had kept it a few days.]

2. CUBAN SPARROW-HAWK, *T. DOMINICENSIS*. Differs from 1 in being chiefly dark slaty-gray above: beneath deep rusty. Female, rusty above and below; dark markings on sides of head indistinct in both sexes and inner webs of wings are mostly white with dark spots very small. Cuba, casual in Fla.

3. KESTREL, *T. TINNUNCULUS*. Differs from 1 in being larger, 14.00, in having the bluish of head extended over portions of the upper parts, and in being conspicuously streaked below. Europe, accidental in Mass.

Fig. 196.



S, B, d, 1. 14.

Fig. 197.



S, C, a, 1. 1-6.

e. Gray Falcons. Gennaia.

Rather large hawks very pale without any conspicuous markings.

1. PRAIRIE FALCON, *G. MEXICANUS*. 18.00; grayish-brown above, each feather margined with lighter and indistinctly barred with lighter; band on back of head and beneath, white heavily streaked with brown; secondaries, with lighter spots on outer webs. Western U. S. from the eastern border of the Plains to the Pacific south into Mexico; casual in Ill.

C. SHORT-WINGED HAWKS. Accipitridae.

Hawks of varying size with short, rounded wings and long tails, fig. 198, which seldom sail in circles but move with an irregular flight, alternately flapping and sailing; legs, long. Nests in trees; eggs 4, usually whitish, sometimes spotted.

a. Short-winged Hawks. Accipiter.

Characters as above.

1. SHARP-SHINNED HAWK, *A. VELOX*. Male, 11.00; female, 13.00; tail, square, fig. 197; slaty-brown above, white spots on scapularies, four dusky bands on tail, inner webs of wing feathers barred with white; beneath, pale yellowish-rufous banded with white and narrowly streaked with dusky. Breeds throughout N. A. south to Panama; winters from the Middle States southward, rarely as far north as Mass. Goes south in Oct., north in April. Breeds in May. Common. Eggs, heavily spotted.

2. COOPER'S HAWK, *A. COOPERII*. Male, 17.00; female, 19.00; differs from 1 in having the tail more rounded and the legs and middle toe shorter, fig. 198*. Range and time of migration similar to 1. Eggs, seldom spotted, never heavily.

3. AMERICAN GOSHAWK, *A. ATRICAPILLUS*. Male, 21.00; female, 23.00; bluish above; top of head, and broad band on its sides, black; white spots on occiput; three dusky tail bands; mixed white and bluish beneath mostly in bands narrowly lined with dusky, fig. 198. Young, brown above,

white beneath broadly streaked with brown. Eggs, seldom spotted. Breeds throughout eastern N. E. northward passing south in November; in the Middle States northward; north in April common in Mass.

HAWKS. Buteonidae.

, with quite long but rounded wings which often sail in circles high in air; form, muscular; eggs, spotted.

Two-legged Hawks. Buteo.

attached to the toes in front.

TAILED HAWK, B. BOREALIS. Male, tail, length 200; 20.00; female, 23.00; brown above; tail, cinnamon, white at base and with subterminal band of black; white beneath, streaks on throat and in band on breast and across middle of body. Young, with tail paler and having twelve or more dusky bands. Breeds throughout eastern N. A. north to about northern Labrador; feet, stout; four outer primaries, incised on inner webs. Note, a wheezy scream.

1*. **KRIDER'S HAWK, B. B. KRIDERII.** Lighter above than 1, no terminal band on tail, few or no terminal spots beneath. Plains of the U. S. from the Dakotas and Wyoming to Minn. south to Texas; casual in Wis. and Ill.

Fig. 198.



Fig. 200.



Fig. 201.



S, C, a, 2. 1-10.

S, D, a, 1. 1-10.

S, D, a, 4. 1-10.

1**. WESTERN RED-TAIL, *B. B. CALARUS*. Differs from 1 in being darker above, tail always with terminal bar and sometimes with two or three above it; beneath, much more reddish, especially across breast. Western N. A. from the Rockies to the Pacific; casual in Ill.

2. HARLAN'S HAWK, *B. HARLANI*. Male, 20.00; female, 22.00; dark-brown above sometimes streaked with white; tail, irregularly mottled with grayish, white, rufous and dusky; beneath, varying from dark, sooty-brown to white, but if white then streaked across breast and on sides with dusky. Young with tail banded with grayish-brown and dusky. Breeds in the Gulf States and lower Mississippi Valley south to Central America; casual north to Penn. and Iowa.

3. EUROPEAN BUZZARD, *B. BUTEO*. Male, 20.00; female, 23.00; four outer primaries, incised; variable, usually mixed brownish and whitish, tail with from 10 to 13 narrow dusky bands. Europe; accidental in Mich.

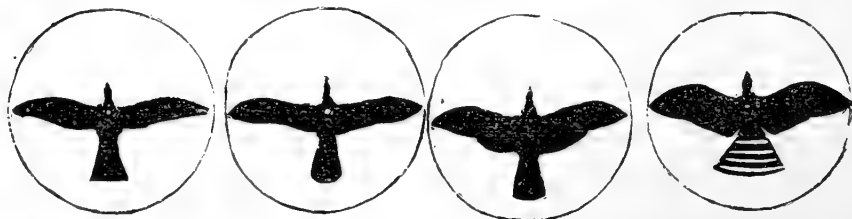
4. RED-SHOULDERED HAWK, *B. LINEATUS*. Four outer quills incised; male, 21.00; female, 24.00; dark-brown above with feathers, especially on bend of wing, more or less margined with reddish; wings with many white bands; tail with four; tail, short in proportion to spread of wings, fig. 201; white beneath banded with reddish. Young, streaked with brown beneath; tail with many bands. Breeds throughout eastern N. A. from Fla. to Nova Scotia; winters from Mass. southward. Note a loud, high scream, "ke-ar" repeated several times with the last syllable prolonged.

Fig. 197*.

Fig. 198*.

Fig. 200*.

Fig. 201*.



4*. FLORIDA RED-SHOULDERED HAWK, B. L. ALLENI. Differs from 4 in being smaller and darker. South Atlantic and Gulf States.

5. SWAINSON'S HAWK, B. SWAINSONI. Three outer quills incised; male, 19.00; female, 20.00; brown above; wings obscurely banded with dusky; tail, tipped with whitish and with about twelve bands of dusky; white beneath, unmarked on throat, elsewhere banded with ashy-red; there is a dark phase in which the under parts are dark-brown, and intermediates occur between this and the light phase. Young, reddish-ash beneath, thickly marked with drop-shaped streakings especially across breast. Western N. A. east to Ill., casual to Mass. and Me.

6. BROAD-WINGED HAWK, B. LATISSIMUS. Differs from 4 in being smaller, 15.00-17.00 and in having two white bars on tail, fig. 202. Young have the throat whiter. Breeds throughout eastern N. A. from Fla. to New Brunswick; goes south in Oct. to winter from the Southern States to northern S. A.; comes north in April. Note, a squeaking whistle.

7. SHORT-TAILED HAWK, B. BRACHYURUS. 16.00; dark-brown above with tail crossed by about seven bands of grayish; white beneath, reddish on side of breast. Young, more or less streaked beneath and the reddish on side of breast is absent. There is a dark phase in which the lower parts are nearly dark-brown; forehead always white. S. A. north to Fla.

b. Feather-legged Hawks. Archibuteo.

Differ from a in being rather more robust, in having smaller feet with tarsus feathered to toes; gape, narrow; food, small animals; not very active.

1. AMERICAN ROUGH-LEGGED HAWK, A. SANCTIOHANNIS. Male, 21.00; female, 23.00; dark-brown above; tail bands, white, 6 to 8; yellowish-white beneath; band of spots on breast and broad band on abdomen, brown; sides of head and above more or less streaked with white and yellowish, fig. 202; from this phase frequently varies to a nearly black

phase, but the basal three-fourths of tail as seen from below is always white. Breeds throughout N. A. north of the U. S.; winters from N. E. south to the Carolinas.

c. Wide-mouthed Hawks. *Brewsteria*.

Differ from *b* in having the gape wider, the bill stouter and the tarsus longer; food, probably largely fish.

1. FERRUGINEOUS HAWK, *B. FERRUGINEUS*. Size of *b*, 1: reddish-brown above streaked with dusky; tibia, reddish, barred with dusky; beneath and tail, white tinged with dusky, from this varies to a nearly black phase. Western N. A. west of the plains; casual in Ill.

Fig. 202.

Fig. 203.

Fig. 204.



S, D, b, 1. 1-8. S, E, a, 1. 1-12. S, F, a, 1. 1-16.

E. EAGLES. *Aquilidae*.

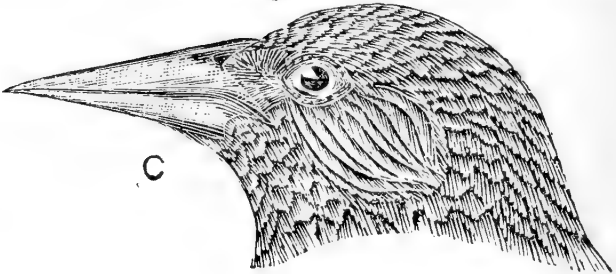
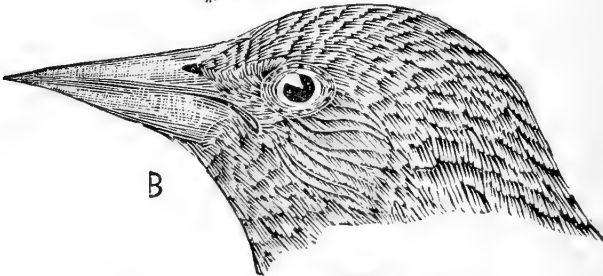
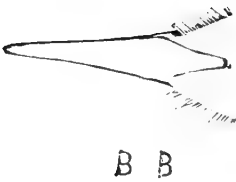
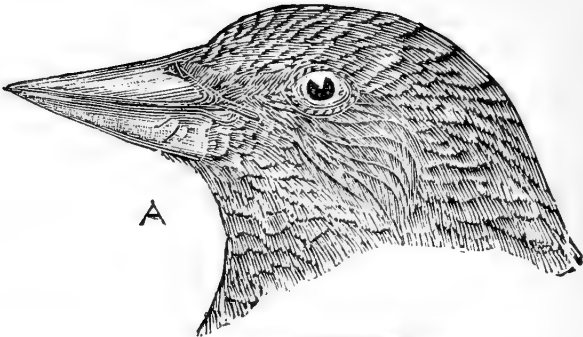
Large, nearly unicolored birds with the tarsus feathered to the toes. Wing-beats, slow, frequently sail high in air. Cries, harsh.

a. Eagles. *Aquila*.

Characters as above.

1. GOLDEN EAGLE, *A. CHRYSAËTOS*. Male, 32.00; female, 37.00; dark brown; base of tail, white; feathers of head, neck, tibia, and tarsus tipped with reddish-yellow; bill, brown; feet, yellow, fig. 203. Young, with basal two-thirds of tail white. N. A. south to Mexico, and northern Old

PLATE 17.



RED-WINGED BLACKBIRDS.

World; in the U. S. breeds chiefly in mountainous parts of unsettled districts. Nests on cliffs; eggs, 2, white spotted with brown. Resident.

F. FISH EAGLES. *Haliaetidae*.

Large birds with the tarsus naked and the tail at least white in adults; food, very largely fish; flight, strong and direct, wing-beats rather slow; often circle high in air. Cries, harsh and loud. Nests often in trees, sometimes on cliffs; eggs, 2 to 3, white, unspotted.

a. White-tailed Eagles. *Haliaetus*.

Characters as above.

1. BALD EAGLE, *H. LEUCOCEPHALUS*. Male, 32.00; female, 37.00; dark-brown; head, neck, and tail, white; iris, bill, and feet, yellow. Young, brown throughout. U. S., breeding in the unsettled districts. Alarm note, a cackling cry. Frequently robs the osprey of fish, when it moves with a rapid flight with quick wing-beats. Resident, fig. 204.

1*. NORTHERN BALD EAGLE, *H. L. ALASCANUS*. Differs from 1 in being larger. N. A. north of the U. S.

2. GRAY SEA EAGLE, *H. ALBICILLA*. Differs from 1 in having the head always brown. Northern Europe, Asia, and Greenland.

G. OSPREYS. *Pandionidae*.

Large birds with strong feet and naked tarsi, very long wings and rather short tails, which feed wholly on fish. Flight, strong, direct with slow wing-beats. Often sail in circles over water; fish by dropping directly downward and the secured fish is carried head forward. Nests, in trees; eggs, 3 to 5, creamy thickly spotted and blotched with reddish. Cries, shrill, whistling screams.

a. Fish Hawks. *Pandion*.

Characters as above.

1. AMERICAN OSPREY, *P. CAROLINENSIS*. Male, 22.00; female, 24.00; sides of head and under parts, white with a band of spots crossing breast; line through eye and above,

dark-brown, fig. 205. Breeds from Hudson Bay to Fla. west to the Pacific. Winters from the Carolinas south to northern S. A. Migrates south in Oct.; north in April.

H. VULTURE EAGLES. *Polyboridae*.

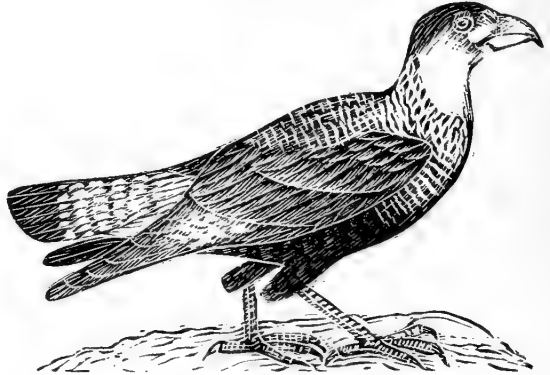
Rather singular birds with long wings, tails and legs, which are chiefly terrestrial and which live largely upon decaying animal matter, but will occasionally catch living animals. Flight direct by alternate sailings and flappings; sometimes circle in air like vultures. Nests in trees, eggs 2 to 4 whitish spotted with reddish-brown.

Fig. 205.



S, G, a, 1. 1-10.

Fig. 206.



S, H, a, 1. 1-8:

a. *Caracaras*. *Polyborus*.

Characters as above.

1. AUDUBON'S CARACARA, P. CHERIWAY. 23.00; dark-brown above banded on upper tail coverts and tail with dusky, on wings with white; tail, white at base, black at tip; white beneath with a dusky band on tibia and abdomen, finely banded elsewhere with dusky; feet, yellow, fig. 206. Fla., Tex., and Arizona south to northern S. A. Resident.

T. PARROTS, MACAWS, Etc.
Psittaci.

Birds of varying size, color and form with a strong hooked bill and with two toes in front and two behind.

A. LONG-TAILED PARROTS. Psittacidae.

Tail, long and pointed; cheeks, feathered.

a. American Paroquets. Conurus.

Medium-sized parrots with long wings, green with bright markings on head. Flight, very swift and direct with rapid wing-beats. Cries, harsh and loud.

1. CAROLINA PAROQUET, *C. CAROLINENSIS*. 13.50; green; head and neck, yellow; forehead, sides of head, and inner webs of most of tail feathers, orange. Young with head and neck green more or less spotted with yellow, fig. 207. Formerly ranged throughout middle and southern U. S. from the Mississippi Valley eastward, now confined to a small section of middle Fla. Nests in communities; eggs, white.

U. OWLS. Strigi.

Well known birds of varying size, loose, fluffy plumage, large eyes which are directed forward, surrounded by a partial or entire disk of ray-like feathers; bill, strong and hook-

Fig. 207.

Fig. 208.



T, A, a, 1. 1-6.



U, A, a, 1. 1-10.

ed; toes, two in front and two behind; tarsus feathered; mainly nocturnal in habit. Young, inactive when hatched and covered with whitish down. Flight, direct with rather slow wing-beats. Eggs, white, 2 to 7. Food, small animals and insects, and occasionally fishes.

A. DISKED OWLS. *Strigidae*.

Light-colored owls with the facial disk perfect, which nest in caves or deserted buildings.

a. Barn Owls, *Strix*.

Wings, very long; tail, short; plumage very soft. Cries, loud and shrieking.

1. AMERICAN BARN OWL, *S. PRATINCOLA*. 17.00; pale yellowish-brown, lighter beneath, spotted everywhere with darker brown; edge of facial disk and bands on wings and tail also brownish, fig. 208. U. S., rare in the northern portions. Breeds from the middle sections southward where it is a resident.

B. HORNED OWLS, Etc. *Bubonidae*.

Owls of varying sizes, with the plumage not as soft as in A, and the facial disk is never as perfect.

a. Dusky Owls. *Syrnium*.

Dark-colored, banded owls without ear tufts and with plumage very full.

1. BARRED OWL, *S. NEBULOSUM*. 20.00; banded with dusky and white, transversely above and on upper breast, longitudinally below this; iris, brown, bill, yellow, fig. 209. Eastern U. S. from the Gulf States to Canada. Resident. Open nests in trees, eggs, in Feb. and March. Cries, prolonged hoots, "*Woc woc wu woo*" followed by a series of '*Wock wock wock wo-o-o*'. Common in unsettled sections.

1*. FLORIDA BARRED OWL, *S. N. ALLENI*. Smaller and darker than 1 with fewer feathers on toes. South Atlantic and Gulf States. Very common.

b. Gray Owls. *Scotiaptex*.

Large gray owls with rather irregular whitish markings and with toes densely covered with long, hair-like feathers.

1. GREAT GRAY OWL, *S. CINERA*. 22.00; gray irregularly barred above and longitudinally streaked below with whitish; iris and bill, yellow. Arctic America straggling south in winter as far south as N. J. and Ill.

Fig. 209.



U, B, a, 1. 1-11.

Fig. 210.



U, B, c, 1. 1-10

c. Long-winged Owls. *Asio*.

Medium-sized owls with very long wings and moderately long tails; plumage soft but not very full; form, slender.

1. AMERICAN LONG-EARED OWL, *A. WILSONIANUS*. 15.00; ear tufts long; dark brown streaked, spotted and mottled with yellowish white which predominates below, fig. 210. Resident throughout temperate N. A. Occurs in thick swamps. Note, a single loud screech. Nests, placed in trees; eggs, in early May.

Fig. 211.



2. SHORT-EARED OWL, *A. ACCIPI-TRINUS*. 15.00; ear-tufts, very short; dark-brown with the feathers prominently mar-

U, B, c, 2. 1-10.

gined, spotted, barred and streaked with yellowish, fig. 211; prominent dusky spot on under side of wing showing in flight. Occurs in open sections, commonly on the sea coast among low bushes. Breeds in N. A. chiefly north of the U. S.; winters from southern N. E., rarely from Mass. southward; migrates in Oct. and April.

d. Horned Owls. *Bubo*.

Large, robust owls with prominent ear tufts, long wings, and moderately long tails; plumage not very soft.

1. GREAT HORNED OWL, *B. VIRGINIANUS*. 23.00; dark-brown mottled, spotted, barred and streaked with yellowish, reddish and white; patch on upper breast, white, fig. 212. Eastern N. A. from Labrador south, resident in the unsettled sections. Cries, not dissimilar to a, 1.

1*. WESTERN HORNED OWL, *B. v. SUBARCTICUS*. Differs from 1 in being much lighter, the white markings are prominent. Fig. 212.

1**. DUSKY HORNED OWL, *B. v. SATURATUS*. Differs from 1 in being much darker, the black predominating. Pacific coast from Cal. northward, Labrador and Hudson Bay.



e. Eared Owls.

Megascops.

U, B, d, 1. 1-12.

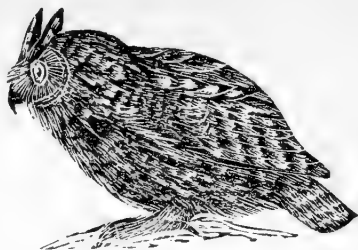
Small, robust owls with long wings and short tails and prominent ear tufts.

1. SCREECH OWL, *M. ASIO*. 9.00; reddish above, white beneath, streaked on back, barred on wings and tail, barred and streaked beneath, with dusky; above from red varies to gray, with similar markings with a grayish tone, fig. 213. Resident in temperate eastern N. A. west to the

plains, south to Ga. Common. Nests, in holes; eggs, in May. Note, a shivering cry.

1*. FLORIDA SCREECH OWL, *M. A. FLORIDANUS*. Differs from 1 in being smaller and darker. South Atlantic and Gulf States.

Fig. 213.



f. Bird Owls. *Nyctalea*. U, B, e, 1. 1-5.

Small, rather slender, long-winged, short-tailed owls without prominent ear tufts. Nests, in holes.

1. SAW-WHET OWL, *N. ACADICA*. 8.00; reddish-brown above, narrow, white lines on head and face and white spots elsewhere; tail with three lines of spots; white beneath

Fig. 214. streaked with reddish-brown, fig. 214.

Breeds locally from the Middle States northward, wandering somewhat in winter. Not common. Note, a rasping cry.



2. RICHARDSON'S OWL, *N. RICHARDSONI*. 9.00; differs from 1 in color in being greenish-brown where that is reddish and in having five lines of white spots on

U, B, f, 1. 1-8. tail. Breeds from the Gulf of St. Lawrence. northward, wandering south in winter into northern U. S. Rare.

g. Long-tailed Owls. *Surnia*.

Medium-sized owls with long wings, long, graduated tails, and compact plumage; they are rather diurnal.

1. AMERICAN HAWK OWL, *S. CAPAROCH*. 15.25; dark, greenish-brown above with narrow lines on head and face and spots elsewhere of white; tail, with eight lines of white spots; white beneath, spotted on sides of neck and transversely banded elsewhere with black, fig. 215. Breeds from Newfoundland northward, wandering southward into northern U. S. in winter.

h. Arctic Owls. *Nyctea*.

Large owls with long wings and tails, compact plumage, Fig. 215. feet covered with long, hair-like feathers, and diurnal habits.



1. SNOWY OWL, *N. NYCTEA*. 22.00; white, more or less spotted, mottled and barred, especially above, with dark-brown, fig. 216; females and young being more heavily marked. Northern portions of northern hemisphere, in N. A. breeding north of the U. S. migrating south in winter to the Middle States. Nov. to April. Note, a whistling cry.

C. GROUND OWLS. *Athenidae*.

Rather small owls with long wings and U, B, g, 1. 1-10. legs, short tails, and small eyes; facial disk very imperfect. Fig. 216.

a. Burrowing Owls. *Speotyto*.

Characters as above; nests, placed in holes in the ground.

1. BURROWING OWL, *S. HYPOGAEA*. 10.00: yellowish-white barred and spotted with reddish or yellowish brown, the dark color predominating above. Western U. S. from the Great Plains to the Pacific; accidental in N. Y. and Mass.



U, B, h. 1. 1-15.

V. CUCKOOS. *Cuculi*.

Slender birds of varying size but never very small, with long tails, compact plumage, and two toes in front and two behind.

A. ANIS. *Crotophagidae*.

Slender cuckoos black in color, with long tails of eight feathers, long wings and bill compressed, and with the culmen of upper mandible elevated and ridge-like, plate 14.

a. **Black Cuckoos. Crotophaga.**

Characters as above.

1. ANI, C. ANI. 14.00; feathers of head and neck margined with a bronzy iridescence. West Indies, Bahamas, and eastern S. A., casual in southern Fla. and La.; accidental in Penn. Cries, loud and in a minor tone. Flight, heavy and jay-like. Social at all times, several females placing their eggs in one nest, probably polygamous.

B. AMERICAN CUCKOOS. Coccyzidae.

Slender cuckoos with long, graduated tails and smooth plumage; space around eye, naked.

a. **Brown-Backed Cuckoos. Coccyzus.**

Brown above, white beneath with more or less white on tip of tail. Nests, in bushes; eggs, blue, unspotted and deposited irregularly. Feathers of tibia elongated. Flight, steady and direct with rather rapid wing-beats, suggesting a pigeon.

1. **YELLOW-BILLED CUCKOO, C. AMERICANUS.**
12.00; tail, dark, outer feathers, broadly tipped with white; wing, strongly tinged with cinnamon; under mandible, yellow; space around eye, dark, fig. 217. Breeds in eastern temperate N. A. west to the plains in May; winters in Costa Rica; migrates in May and Sep. Notes, "Cow-co-cow-co" rather brokenly given in a decidedly minor tone. Common most seasons.

Fig. 217.

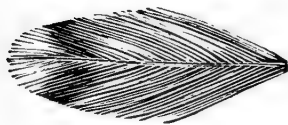


V, B, a, 1. 1-4.

2. MANGROVE CUCKOO, *C. MINOR*. Differs from 1 in being strongly tinged with reddish yellow beneath and in having dark space around eye darker. Breeds in the West Indies; rare on the Fla. Keys and in La. Resident.

2*. MAYNARD'S CUCKOO, *C. M. MAYNARDI*. Differs from 2 in being much paler beneath. Bahamas, largely resident; rare on the Fla. Keys. Notes, "*Ou-ou-ou-ou-qua-qua-qua-coo-coo-co.*" The first four are cuckoo-like, the next three harsh, and the last three decidedly cuckoo-like.

Fig. 218.



3. BLACK-BILLED CUCKOO, *C. ERYTHROPHthalmus*. Differs from 1 in having the tail wholly like back narrowly tipped with white, no cinnamon on wings, no black on head, and under mandible dark-blue; naked space around eye, red, plate 14, fig. 218, tip of

V, B, a, 3. tail feather. Breeds throughout eastern N. A. west to the Rockies and north to Labrador; winters in S. A.

W. WOODPECKERS. *Pici*.

Well-known birds with chisel-shaped bills, large, strong heads, long wings, two toes in front and two behind, or one absent.

A. TRUE WOODPECKERS. *Picidae*.

Tail feathers, stiffened and pointed. Nests, in holes made by the birds; eggs, 6 or 7, white. Young, naked and helpless. Flight, heavy and undulating but often swift. Drum on trees, etc. as a roll-call.

a. Mottled Woodpeckers. *Sphyrapicus*.

Woodpeckers with rather short, slender bills and with plumage much mottled above and yellowish below.

1. YELLOW-BELLIED SAPSUCKER, *S. varius*. 8.50; longitudinal white patch in wing; male with top of head and throat crimson; black patch on breast fig. 219; female, throat white. Young, with the black of breast replaced with gray

and little red on head, fig. 219; adult plumage, gradually assumed. Breeds in eastern N. A. from northern Mass. northward; winters from the Carolinas southward through the Bahamas and West Indies to Costa Rica. Migrates in April and Oct. Common. Cries, excepting the "yucka" note, all harsh and quite querulous.



b. Banded Woodpeckers.
Centurus.

Woodpeckers with stouter, slightly curved bills, banded with black and white above, plain beneath.

1. RED-BELLIED WOODPECKER, **W, A, a, 1-6.**
C. CAROLINUS. 10.00; male, top of head from bill to nape, scarlet; ashy-gray beneath more or less tinged with red; upper tail coverts, white, fig. 220; female with

Fig. 220.

top of head gray, nape, scarlet. Resident in eastern U. S. from Penn. southward; casual as far north as Mass. Cries, harsh and querulous, with the "yucka" note rarely given.



c. Tri-colored Woodpeckers.
Melanerpes.

Rather stout woodpeckers with colors, red, white and black, arranged in masses.

1. RED-HEADED WOODPECKER, **M.**
ERYTHROCEPHALUS. 9.00; head and neck all around, scarlet; band on secondaries and rump

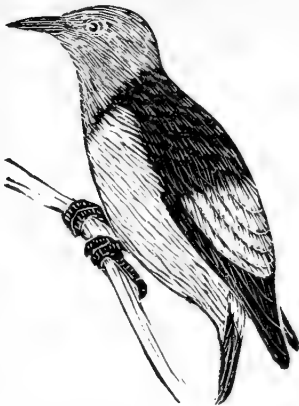
W, A, b, and beneath, white; remaining upper portions,

1. 1-7. black, fig. 221. Young, head, gray; white of secondaries broadly banded with black. Sexes, similar; Breeds in the U. S. west to the Rockies; local east of the Hudson River, usually migratory north of Penn. Very noisy, cries, harsh and loud.

d. **Black and White Woodpeckers, Dryobates.**

Rather small woodpeckers black and white, especially above; males with some red on head.

Fig. 221



W, A, c, 1. 1-6.

Fig. 222.



W, A, d, 1. 1-6.

1. **HAIRY WOODPECKER, D. VILLOSUS.** 10.00; markings on side of head, stripe down back, bands of spots on wings, outer tail feathers, and beneath, white, otherwise black above; male with red on nape, fig. 222. Resident in the northern and middle portions of eastern U. S. Cries, sharp, sometimes rapidly repeated as a call.

1*. **NORTHERN HAIRY WOODPECKER, D. V. LEUCOMELAS.** Larger than 1. Breeds in northern N. A. north of the U. S. wandering somewhat south in winter.

Fig. 223.



1**. **SOUTHERN HAIRY WOODPECKER, D. V. AUDUBONII.** Smaller than 1. South Atlantic and Gulf States, north to the Carolinas.

2. **SOUTHERN DOWNY WOODPECKER, D. PUBESCENS.** Differs from 1 in being smaller, 6.50, and in having the outer tail feathers barred with black, fig. 223, dusky beneath. South Atlantic and Gulf States north to the Carolinas.

2*. **DOWNY WOODPECKER, D. P. MEDIANUS.** Larger than 2 and clearer white beneath.

W, A, d, 1. 1-4. Middle and northern portions of

eastern U. S. and northward.

3. COCKADED WOODPECKER, *D. BOREALIS*. 8.25; Differs from 2* in being transversely banded with white above and streaked on sides below with black; red in males confined to a small spot on side of nape, fig. 224. Southern U. S. from N. C. southward. Somewhat social and very noisy; cries, harsh and querulous.



Fig. 224.

W, A, d, 4. 1-5.

e. Three-toed Woodpeckers. *Picoides*.

Black and white woodpeckers with three toes; males with yellow on top of head.

1. ARCTIC THREE-TOED WOODPECKER, *P. ARCTICUS*. 9.50; wings banded with white spots and sides with black, fig. 225. Northern N. A. wandering south into northern U. S. as far as N. E.

Fig. 225.



W, A, e, 1. 1-6.

Fig. 226.



W, A, e, 2. 1-6.

2. AMERICAN THREE-TOED WOODPECKER, *P. AMERICANUS*. Differs from 1 in having the entire back band-

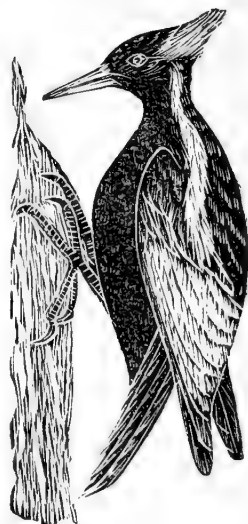
ed with white, fig. 226. Northern N. A. east of the Rockies, wandering south into northern U. S. as far as Mass.

f. Scarlet-crested Woodpeckers. *Campephilus*.

Large woodpeckers with short feathers on neck; white bills; black with white markings.

1. **IVORY-BILLED WOODPECKER, *C. PRINCIPALIS*.** 21.00; secondaries and line on side of neck extending down back, white; back part of head and upper neck, scarlet; black elsewhere, fig. 227; female with scarlet replaced with black. Now restricted to a small portion of middle Fla.; formerly ranged through most of the Southern States. Cries, loud and harsh, sometimes run together to form a continuous call.

Fig. 227.



**g. Black Woodpeckers
Ceophloeus.**

Fig. 228.



W, A, f, 1. 1-10.

Form, similar to f and size but little inferior; no white on secondaries above.

W, A, g, 1. 1-9.

male, front of head and maxillary patches, black. North Carolina southward. Common.

1. **PILEATED WOODPECKER, *C. PILEATUS*.** 18.50; black; throat, line on sides of neck, patch on primaries and basal half of wing, white; maxillary patch and top of head with crest, scarlet, fig. 228; female, front of head and maxillary patches, black. North Carolina southward. Common.

1*. NORTHERN PILEATED WOODPECKER, C. P. ABIETICOLA. Larger than 1. Southern Alleghanies northward but restricted to large areas of forests.

h. Flickers, Colaptes.

Medium sized woodpeckers with a long, curved bill, and a patch of white on rump.

1. FLICKER, C. AURATUS. 12.00; brown above, reddish-ash beneath with a whitish washing on chest and abdomen, banded above, maxillary patch, crescent on breast, and round spots beneath, black; top of head, bluish; scarlet patch on nape, fig. 229; female lacks the black maxillary patch. Southern U. S. south of S. C. Common. Cries, a whistling scream, an interrupted call, a series of "yucka" notes; the first is an alarm, the next two breeding notes.



Fig. 229.

W, A, h. 1. 1-6.

1*. NORTHERN FLICKER, C. A. LUTEUS. Larger, lighter above but with less white beneath. Eastern N. A. from S. C. northward. Abundant.

X. GOATSUCKERS. Caprimulgi.

Long-winged birds with small bills having a wide gape;

Fig. 230.



X, A, a, 1.

eyes, large; colors, dull and inconspicuous; feet, small; middle toe nail, pectinated, fig. 230. Distributed throughout the temperate and tropical zones. Eggs, 2, deposited on the ground, sometimes in caves. Young, covered with down but helpless. Food, insects.

A. NIGHT-JARS. Caprimulgidae.

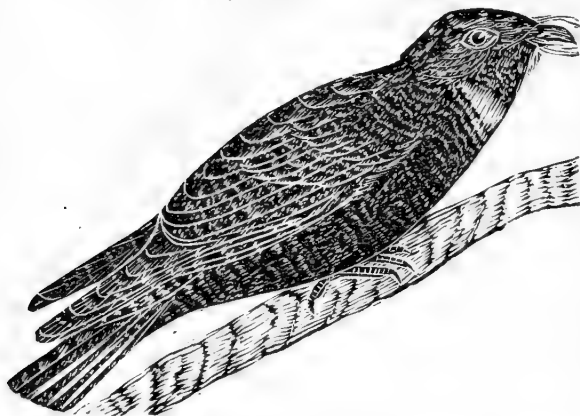
Characters as above.

a. Whippoorwills. Antrostomus.

Goatsuckers of nocturnal habits with bristles at base of bill; colors, browns and blacks mingled. Eggs, creamy, spotted with brown.

1. CHUCK-WILL'S WIDOW, A. CAROLINENSIS. 13.00;

Fig. 231.



mixed reddish-brown and black; crescent on throat, yellowish-red; patch on inner webs of three outer tail feathers, white above, buff beneath; female lacks the crescent on throat and white on tail, fig.

X, A, a, 1. 1-4.

231. Breed from

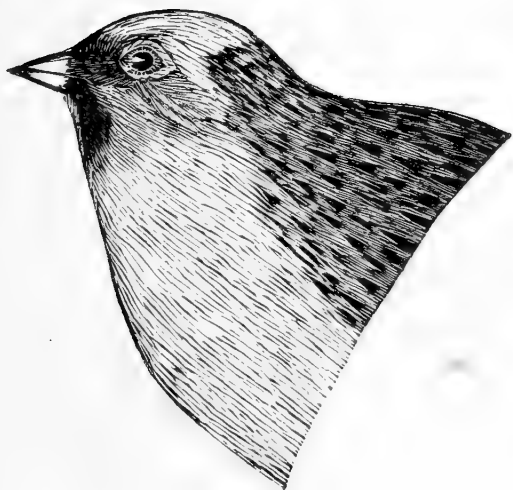
Va. southward through the South Atlantic and Gulf States; accidental in Mass.; winters in the Bahamas, Cuba, eastern Mexico south to Central America; migrates in Sep. and March. Common. Note "Chuck-will's-widow" rapidly given, sometimes also a series of chuckling notes. Found in woodlands by day, fly about dwellings at night.

Fig. 232.



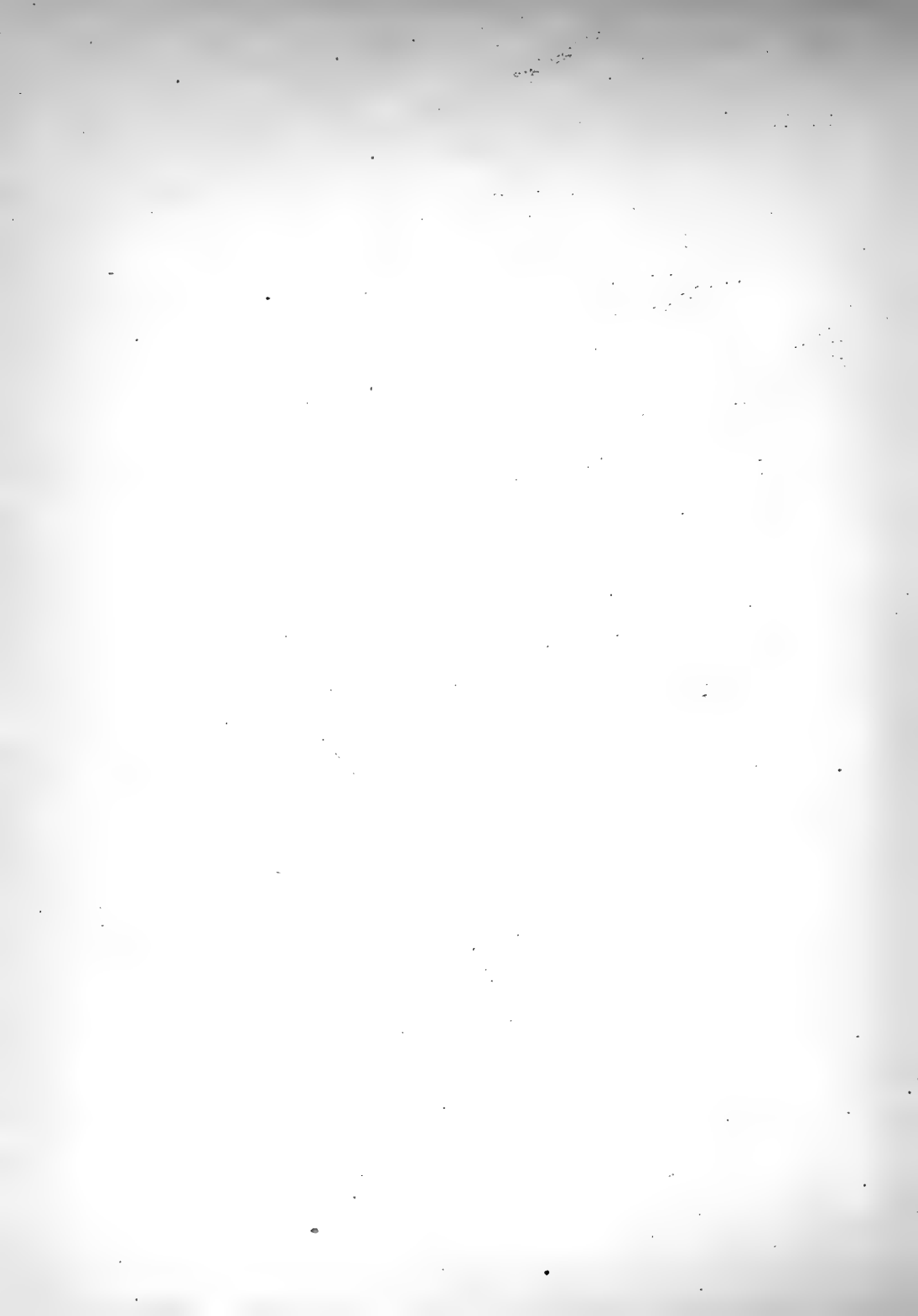
2. WHIP-POOR-WILL, A. VOCIFERUS; 10.00; mixed ashy brown and black, white crescent on throat and white patch on outer

X, A, 2. 1-1.



UPPER FIG., FEMALE ROSE-BREASTED GROSBEAK:

LOWER FIG., REDPOLL.



tail feathers; female does not have the crescent well defined and no white on tail, fig. 232. Breeds throughout eastern N. A. from the Carolinas north to Canada, west to the Plains. Common in the unsettled districts. Note, "*Whip-poor-will*" given very rapidly and repeatedly, also a chuckling note. Found in woodlands by day.

b. Nighthawks. Chordeiles.

Similar in form to a, but with smaller bills with no bristles at base; fly by day or in the twilight. Occur in the open country. Eggs, grayish spotted with dusky.

1. NIGHTHAWK, C. VIRGINIANUS. 9.40; mixed grayish and dusky above; Fig. 233.

banded with white and dusky beneath; large spot on primaries, crescent on throat and line of spots on tail, white, fig. 233; female lacks the white spots on tail and has the crescent spotted with dusky. Breeds throughout eastern N. A. from Fla. north to Labrador; winters in S. A.; migrates in Sep. and



May. Eggs, placed in gravelly spots, sometimes on the gravelled roofs of buildings. Notes, a shrill, rasping cry repeated when the bird is darting zigzag high in air, and a booming sound as the bird descends from this height to a point near the ground when he turns to ascend. Common.

X, A, b, 1. 1-5.

1*. FLORIDA NIGHTHAWK, C. V. CHAPMANI. Smaller, darker, but with more white above than in 1. Florida.

Y. SWIFTS. Cypseli.

Compact birds with long primaries but the other portion of the wing shortened; bill, small with a wide gape; color, dull sometimes relieved by white markings.

A. SPINE-TAILED SWIFTS. Chaeturidae.

Tail feathers denuded at tip and produced into a spine,

Fig. 234.



fig. 234; nests of sticks fastened together with a gluey secretion from the mouth, placed in a hollow tree, cave or other rock shelter or in chim-

Y, A, a, 1.

neys; eggs, white, 4; young naked and helpless; adults are incapable of alighting on other than a vertical surface, hence are seldom seen at rest; move with a swift, continuous flight by alternately moving the wing tips with a quivering motion and sailing. Food, insects.

a. Spine-tailed Swifts. Chaetura.

Characters as above.

1. CHIMNEY SWIFT, *C. PELAGICA*. 5.30; sooty-brown; wings, blackish, fig. 235. Eastern N. A. north to Labrador; winters south of the U. S.; migrates in Oct. and late April. Cries, a shrill chatter. Common.

Fig. 235.

**Z. HUMMINGBIRDS.****Trochili.**

Y, A, a, 1. 1-4.

Small birds with wings similar to **Y** but which differ in having an awl-shaped bill, with a peculiar tongue; portions of plumage, frequently iridescent; nests in trees, bushes, etc. made of fine material often covered with lichens; eggs, 2, white; young naked and helpless; flight swift and darting; wing-beats exceedingly rapid; food, the sweet juices of flowers, and small insects; sexes usually different, often with very differently formed tails. Found only in America.

A. FORKED-TAILED HUMMINGBIRDS.

Trochilidae.

Medium sized hummingbirds with rather short bills; throat with scale-like, iridescent feathers.

a. Green-backed Hummingbirds. *Trochilus*.

Tail, forked in adult male and dark, rounded in female and young and tipped with white; back, green.

1. RUBY-THROATED HUMMINGBIRD, *T. COLUBRIS*. 3.50; throat of male, metallic ruby, otherwise white beneath. Female without ruby throat, plate 16. Breeds throughout eastern N. A. from Fla. to Labrador; migrates north in May, south in Sep.; winters from Fla. to Mexico.

AA. KINGFISHERS. *Alcedinae*.

Birds of varying sizes, but with long bills having wide gapes, long wings, short tails, and small feet. Food, often fishes, sometimes other small animals. Occur throughout temperate and tropical regions of the world. Colors, often bright. Eggs, white. Young naked when hatched and helpless.

A. CRESTED KINGFISHERS. *Cerylidae*.

Head, crested, legs very short; two outer toes joined at base.

Fig. 236.

a. Belted Kingfishers. *Ceryle*.

Bluish above with the lower parts conspicuously banded. Sexes, unlike.

1. BELTED KINGFISHER, *C. ALCYON*. 22.00; male with single band of bluish like the back, fig. 236; female with an additional band of brownish-red below this. Breeds throughout N.



AA, A, a, 1. 1-10. A. from the southern border of the U. S. north to the Arctic

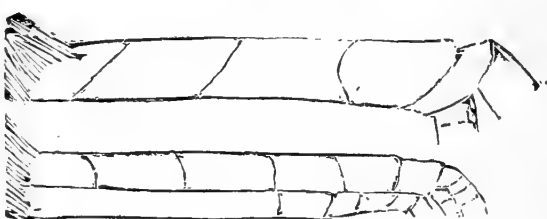
Ocean. Winters from the Middle States, occasionally as far north as Mass., south to Panama; migrates south in Oct., north in April. Nests in holes of perpendicular banks; eggs, 6, white. Note, a harsh rattle, given as the bird flies or perches. Flight direct, often slow and rather jerky but sometimes swift and darting. Common.

BB. SONGLESS PERCHERS. Clamatores.

Hind toe on a level with the anterior toes; scales of hind portion of tarsus not

Fig. 237.

projected backward into a sharp ridge, fig. 237, (upper fig., tarsus of Kingbird; lower of Pine Grosbeak, both much enlarged); musical apparatus (sy-



rinx) provided with less than four pairs of vocal muscles,

fig. 238. fig. 238 (enlarged). Small birds, inhabiting temperate and tropical regions, which are not capable of producing varied songs. Young naked and helpless.



A. TYRANT FLYCATCHERS.

Tyrannidae.

Rather small, dull-colored birds with quite long wings, flattened bills with bristles at the base. Sexes, similar. Food, mainly insects, caught in air.

BB, A, b, 1. a. Scissor-tails. *Milvulus*.

Tail, very long and forked; outer primaries, narrowed at tip; crown, with a concealed bright spot. Nests, in trees; eggs, 4, spotted.

1. FORK-TAILED FLYCATCHER, *M. TYRANNUS*. 12.00; ashy above, white beneath; top and sides of head, black; crown patch, yellow; only one outer quill, incised. South America, north to Mexico and accidentally to the U. S. east to N. J.

Fig. 239.



2. SCISSOR-TAILED FLYCATCHER, *M. FORFICATUS*. Differs from 1 in having portion of tail rosy, under wings and hind parts beneath, and crown patch, orange; three outer primaries, incised, fig. 239. South-western States; accidental in Fla., N. J., N. E., and Hudson Bay.

b. King Birds. *Tyrannus*.

Differ from *a* in having the tail much shorter without the long outer feathers.

1. KINGBIRD, *T. TYRANNUS*. 8.40; dark slaty above, white beneath **BB**, **A**, *a*, 2. 1-4.

Fig. 240.



BB, **A**, *b*, 1. 1-4. and on tip of tail, fig. 240. Breeds throughout eastern N. A.; winters from Mexico to S. A.; migrates north in early May, south in Sep. Nests in trees or bushes, often over water; eggs in early June. Cries, shrill and loud, sometimes darts about in air, especially in the evening, uttering a shrill twittering; flight direct, swift, with rapid downward wing-beats. Frequents open sections and perches much, often low, launching out after insects. Very common.

2. GRAY KINGBIRD, *T. DOMINICENSIS*. Larger than 1, 9.50; tail, somewhat forked, fig. 241; lighter gray above, yellowish below, no white on tail tip. South Atlantic States,

Fig. 241.



Bahamas and West Indies, winters further south, accidental in Mass. Migrates north in April. More noisy than 1 with harsher cries.

3. ARKANSAS KINGBIRD, *T. VERTICALIS*. Differs from 2 in being bright yellow beneath with throat ashy and four outer primaries are narrowed at tip; lighter ash above. Western U. S.; accidental in Md., N.

BB, A, b, 2. 1-4. J., N. Y., Mass., and Me.

c. Crested Flycatchers. *Myiarchus*.

Good-sized flycatchers with the feathers of the head elongated, throat ashy; yellow beneath; back, green; more or less cinnamon on inner webs of wings and tail. Nests in holes of trees; eggs, 4 or 5, buff lined and streaked with brown and lilac.

1. CRESTED FLYCATCHER, *M. CRINITUS*. 9.00; cinnamon on wings and tail very conspicuous. Breeds through eastern U. S. north into southern Canada, in early June; migrates in May and Sep. Cries, a series of surprised whistles followed by a series of chatters, all loud. Frequents open woodlands and orchards, not very common and rather local in N. E. but abundant further south and west. Fig. 242.

d. Phoebes. *Sayornis*.

Smaller flycatchers with nearly square, but broad tails and with the feathers of the crown not as long as in c; slight wing bands; under mandible, black.

1. PHOEBE, *S. PHOEBE*. 7.00; brownish-olive above, darker on head, yellowish-white beneath, more yellow in winter, fig. 243. Breeds through eastern N. A. from S. C. northward in April and late May. Moves tail up and down and switches it immediately after alighting. Note, "*Phee-bee*" quickly and rather harshly given with the accent on the first syllable; sometimes the note is prolonged and becomes more musical; heard usually in spring, sometimes in autumn. Winters from the Carolinas southward; migrates in March and Oct. Nests placed in the shelter of out buildings, rocky cliff banks, etc. composed of moss, grass, etc., mixed with mud; eggs white, occasionally dotted with reddish.

Fig. 242.



BB, A, c, 1. 1-4.

Fig. 243.



2. SAY'S PHOEBE, *S. SAYA*. A little larger than 1, paler above, and reddish-ash beneath. Eastern U. S.; accidental on Cape Cod, Mass.

e. Pewees. *Contopus*.

Differs from d in having the wing-bands more prominent and the under mandible yellow. Nests in trees; eggs, always spotted.

1. WOOD PEWEE, *C. VIRENS*. 6.50; dark olive-brown above, white beneath, tinged with olive across breast and on sides, fig. 244. Breeds through eastern N. A. from Fla. to Newfoundland in May and June. Note, "*Pee-wee*" or "*Pe-e-wee*" given in a sweet, long-drawn, resigned tone. Frequents open woodlands and groves, some-

BB, A, d, 1. 1-4.

times in villages. Nest of grass, etc. covered with lichens, saddled on a limb of a tree. Winters in Central America and northern S. A. Migrates in May and Oct. Common.

Fig. 244.



f. Long-winged Pewees.

Nuttallornis.

More robust in form than e with longer wings and larger feet.

1. OLIVE-SIDED FLYCATCHER, N. BOREALIS. Larger than e, 1, 7.60; with the olive of the sides darker and inclined to be streaked, in strong con-

BB, A, e, 1. 1-4. breast with the yellowish of under parts a long, silky tuft of white feathers on flank, fig. 245. Breeds in the higher mountainous parts of the U. S., occasionally from Mass. northward to British Columbia and the Saskatchewan River; winters in Central America and northern S. A.; migrates north in late May, south in Sep. Not very common. Nest of sticks; eggs, 4, creamy, heavily spotted with brown. Notes, loud whistles. Frequents open spots, near woodlands.

Fig. 245.



g. Little Flycatchers.

Empidonax.

Small flycatchers with short bills, greenish or olive above, white or yellowish beneath; light eye ring and wing-bands. Alarm note a short "Pewit".

BB, A, f, 1. 1-4.

1. LEAST FLYCATCHER, E. MINIMUS. 5.50; brownish-olive above, yellowish-white beneath; two wing-bands and eye-ring white; under mandible, dark, fig. 246. Breeds in eastern N. A. from the Northern States northward; winters

in Central America; migrates in May and Sep. Note, "*Che-bec*" given with great energy and repeated constantly while the bird throws up its head and jerks all over; also a low twitter given while the wings are slightly raised and fluttered. Frequents orchards and low, open growths. Common. Nests, in trees, of hempen fibers, lined with fine material; eggs, 4, white, usually unspotted.

2. TRAILL'S FLYCATCHER, E. TRAILLII. A little larger than 1, usually darker above; plumage always more silky; eye ring, narrow and yellowish; under mandible, yellow. Western N. A. from the Mississippi Valley, east into Ohio, Ill., and Mich.

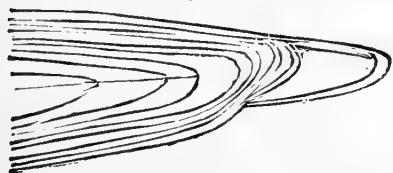
2*. ALDER FLYCATCHER, E. T. ALNORUM. Darker than 2. Breeds in eastern N. A. rarely from Mass. northward; winters in Central America; migrates in late May and Sep. Nests of sticks, often placed in alders; eggs, creamy, spotted with reddish-brown. Notes, "*Ke-wick*" often repeated but is rather more slowly than 1 and more harshly, with less display of energy; frequents low growths in swampy lands.



BB, A, b,

3. GREEN-CRESTED FLYCATCHER, E. VIRESCENS. Larger than 2*; bill, broader; greener above, lighter beneath, with less olive on sides; with 4th primary very short, fig. 247. Eastern N. A. north to southern N. Y. and southern Mich.; rare as far north as southern Mass.; winters in Central

Fig. 247.



BB, A, g, 3.

growths in wooded glens. Nests, of sticks, lichens and moss,

1. 1-4. America; migrates north in late May, south in Sep. Common. Notes, "*Se-wink*", emphatically given, sometimes followed by a series of chuckling notes, made with fluttering wings; frequents low

placed in bushes; eggs, 3 or 4 spotted and blotched with reddish-brown. Common.

4. **YELLOW-BELLIED FLYCATCHER**, *E. FLAVIVENTRIS*. A little smaller than 3; yellowish-green above; pale greenish-yellow on wing-bands, eye ring, and beneath. Breeds in eastern N. A. from northern U. S. northward to southern Labrador, in June; winters in Mexico and Central America; migrates north in late May, south in Sep. Occurs in alder and other swampy thickets, keeps low among the foliage, not very active. Note a low "*Pea*" rather plaintive and long-drawn, frequently given, then, less often, a gravely rendered "*Kil-lick*". Nest on the ground in the shelter of upturned roots of fallen trees or in a bunch of moss; eggs 4 or 5, white dotted with pale reddish.

CC. SINGING PERCHERS.

Oscines.

The largest order of birds in the world and generally distributed. Differ from **BB** in having the back of tarsus produced into a sharp ridge (note exception to this rule in **A**,), fig. 237, upper fig. tarsus of Kingbird; lower, of Pine Grosbeak, both enlarged; syrinx, provided with four or more pairs of vocal muscles. All of the species, with few exceptions, are capable of producing varied and more or less musical sounds, fig. 248. Young as in **BB**.

A. LARKS. Alaudidae.

Medium sized birds with long wings, long inner secondaries, short, conical bills, elongated hind claw, fig. 249 B, and tarsus much as in **CC**, fig. 249 A. Colors dull.

a. Skylarks. Alauda.

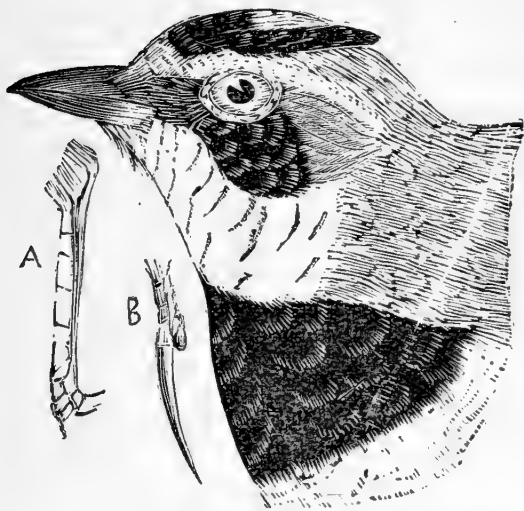
Rather robust birds with the outer primary much shortened and hind claw greatly elongated, fig. 250.

1. **SKYLARK**, *A. ARVENSIS*. 7.50; brown above streaked with reddish-yellow; dull white beneath, reddish on breast and sides where streaked with dark-brown. Europe

and portions of Asia; accidental in Greenland and Bermuda. Celebrated in song and story.

b. Horned Larks. Otocoris.

Differ from **a** in having hind toe nail shorter, fig. 248 B, Fig. 248.



black markings about head and on breast and elongated feathers on sides of crown, fig. 248. Throat, white or yellowish. Nests on ground, eggs, 4 or 5, grayish spotted with yellowish-brown. Song, given while soaring in air, but spend much time on the ground where they run about very actively, squat for concealment, rise when alarmed and move with a flitting

CC, A, b, 1.

flight, seldom direct, but erratic; gregarious; give a shrill, double note when on the wing.

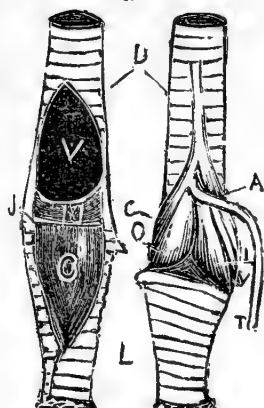
1. NORTHERN HORNED LARK, *O. ALPESTRIS*. 7.50; pinkish-brown above and on sides, otherwise white below: black markings as in fig. 248; throat and line over eye, yellow. Breeds in northeastern N. A., Greenland, and northern parts of the Old World; south in Oct. to winter, especially along the coast, to the Middle States and less commonly to the Carolinas; north in April. Abundant.

2. PRAIRIE HORNED LARK, *A. PRATICOLA*. A little smaller than 1 and much paler, especially above. Breeds in Mass., N. H., Vt., N. Y. and west to the Mississippi Valley in April; in winter as in 1 but less common on the coast in the north; south in Oct., north in April.

B. MAGPIES AND JAYS. Garrulidae.

Rather large birds, usually with bright or striking colors ;

Fig. 249.

**CC, A.**

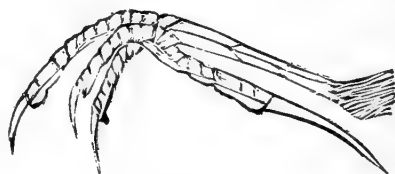
bills, conical; nostrils concealed by bristly feathers; wings, short, rounded; tails, long, often rounded. Nests of sticks, placed in trees or bushes; eggs, 3 to 10, whitish, buff or greenish, thickly spotted with darker. Cries, harsh, seldom very musical. Intelligent and active; somewhat gregarious; not migratory. Flight, heavy and direct.

a. Magpies. Pica.

Large birds with short wings and long, graduated tails; black and white.

1. **AMERICAN MAGPIE, P. HUDSONICA.** 20.00; black, glossed with green, purple, blue, and violet; white on scapularies, inner webs of secondaries, and abdomen, fig. 251. Northern and western N. A.; casual east to Mich. and northern Ill.

Fig. 250.

**CC, A, a, 1.****b. Banded Jays.****Cyannocitta.**

Smaller; tail, shorter and rounded; wings and tail more or less banded with black; head, crested.

1. **BLUE JAY, C. CRISTATA.** 12.00; blue above, grayish-white beneath; wing-band, tips of secondaries and primaries, white; black about head as in fig. 252. Eastern N. A. from Fla. northward. Abundant in woodlands and about dwellings. With the harsh and well-known varied cries, has a low song.

1*. **FLORIDA BLUE JAY, C. C. FLORINCOLA.** Smaller than 1 and duller, more purplish-blue above. Fla. and Gulf coast to southwestern Texas.

c. Bush Jays. *Aphelocoma*.

Crestless jays with long, nearly graduated tails and with
Fig. 251. no black or white markings.



CC, B, a, 1. 1-10.

1. FLORIDA JAY,
A. FLORIDANA. 12.00;
dull blue above: back,
ashy; ashy beneath,
streaked across breast
with bluish, fig. 253.
Scrub lands of Florida.
Abundant and gregar-
ious; not shy; cries and
general habits, very jay-
like.

d. Gray Jays. *Perisoreus*.

Crestless jays with long, loose, titmouse-like plumage
with no striking markings.

1. CANADA JAY, *P. CANADENSIS*. 12.00; gray, dark-
Fig. 252. Fig. 253.



CC, B, b, 1. 1-6.



CC, B, c, 1. 1-6.

er above especially on head behind; yellowish on top of head
and on neck behind, fig. 254. From northern N. E. to north-
ern Mich. northward to Arctic America. Common in heavily
wooded sections; very unsuspicious; cries, jay-like.

1*. LABRADOR JAY, *P. C. NIGRACAPILLUS*. Differs from 1 but the dusky of top and sides of head is more extended forward. Coast of Labrador, and Newfoundland.

Fig. 254.



B* TITMICE. *Paridae*.

Small birds but scarcely differing in general form from A. Nest in holes of trees; eggs, 6 or 7, white spotted with reddish. Food, small insects and their eggs.

a. Chickadees. *Penthestes*.

Head, not crested; plumage, soft and fluffy; wings, short, rounded; tail, long.

CC, B, d, 1. 1-8. 1. CHICKADEE, *P. ATRICAPILLUS*. 5.60; gray above; white beneath; top of head and throat, black; sides, reddish, especially in winter, fig. 255. Eastern N. A. north of the Potomac and Ohio Valleys. Common nearly everywhere. Notes, "*Chick-a-dee-dee*" given with energy, a short, squeaking chirp when disturbed, and other low notes; a long-drawn "*Cee-dee*" given at all seasons, often mistaken for the note of the Phoebe, and a low, silvery song, seldom heard. Flight, wavering and unsteady.

Fig. 255.



2. CAROLINA CHICKADEE, *P. CAROLINENSIS*. Smaller than 1 with the line of demarkation between the black and white of breast very sharply defined, fig. 256. Southeastern States from N. J. southward. Sings more often than 1.

CC, B,* a, 1. 1-3.

2*. FLORIDA CHICKADEE, *P. C. IMPIGER*. Smaller and darker than 2. Lake Ashby, Fla.

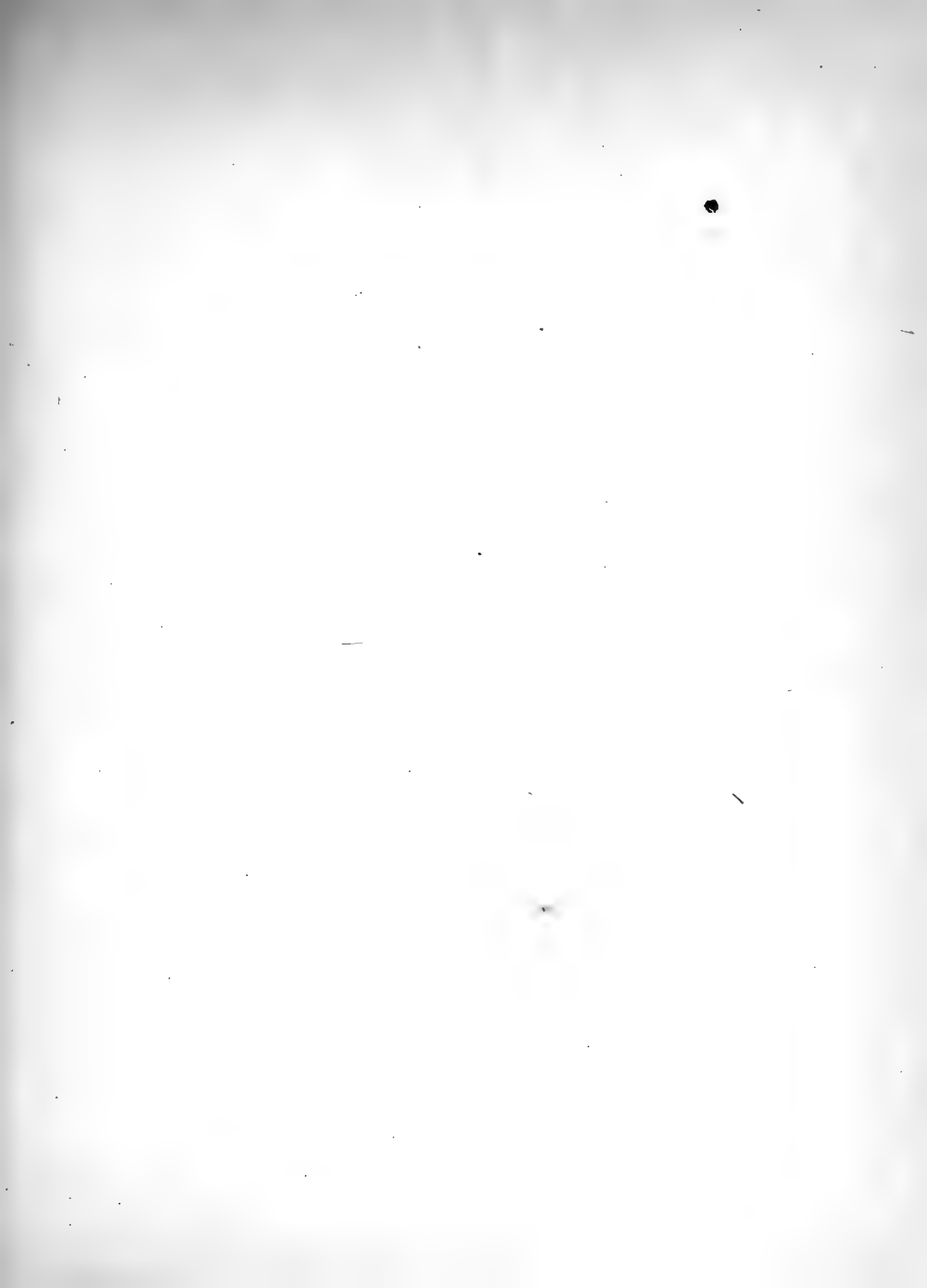
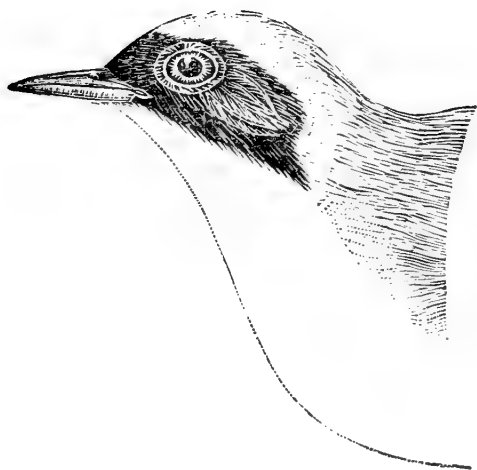


PLATE 18.



UPPER FIGURE, BLUE GROSBEAK; LOWER, MARYLAND
YELLOW-THROAT.

3. HUDSONIAN CHICKADEE, *P. HUDSONICUS*. Differs from 1 in being more reddish above and on sides; black only on throat, fig. 257. Northern N. A. from northern N. S., rarely as far south as Mass. (in winter) northward. Notes, similar to 1 but harsher. 3*. See appendix.

Fig. 256.

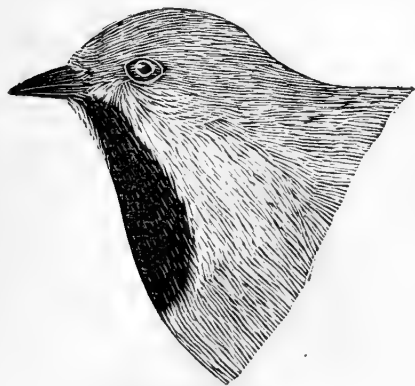


b. Titmice. Baeolophus.

Larger than a; plumage, not as fluffy; head, crested.

1. TUFTED TITMOUSE, *B. BICOLOR*. 6.25; gray above; dull white beneath; forehead and

Fig. 257



CC, B*, a, 2.

eyelids, black; sides, reddish, fig. 258. Eastern U. S. from southern N. J. southward; casual as far north as southern N. E. Common. Notes, similar to those of a, 1. but harsher and louder; song, similar.

C. CROWS. Corvidae.

Large birds with very long wings folding nearly to the tip of tail; all of our species are black, more or less iridescent.

Cries, harsh. Nests, placed in trees or on cliffs: eggs, 3 to 6, grayish spotted with dusky. Flight, strong and direct.

CC, B*, a, 3.

a. Crows. Corvus.

Characters as above.

1. AMERICAN CROW, *C. AMERICANUS*. 20.00; feet, short and stout, fig. 259. N. A. excepting Fla. Notes, "Caw" repeated several times, more rapidly when alarmed; a series of croaks, given quickly; and various guttural notes; some individuals, at least, have a quite musical, but low song.

1*. FLORIDA CROW, *C. A. PASCUUS*. Smaller than 1 with the bill and feet proportionately larger. Florida.

Fig. 258.



2. FISH CROW, *C. OSSIFRAGUS*. 16.00; feet long and slender. Atlantic and Gulf Coasts from Conn. to La.; casual as far north as Mass. Notes, "Ha ha" and some guttural cries. Flight, rather more rapid than 1 with quicker wing-beats. Highly gregarious.

3. NORTHERN RAVEN, *C. PRINCIPALIS*. 24.00; feathers of neck lance-shaped, fig. 260. Northern N. A. south to the Carolinas in the more

CC, B*, b, 1. 1-3. unsettled and mountainous districts. Note, a harsh croak; flight, heavy, sails much. Nests, often on cliffs.

D. STARLINGS. *Sturnidae*.

Medium sized birds with long wings, short tails, and large feet.

Fig. 259.

a. *Sturnus*. Starlings.

Characters as above.

1. STARLING, *S. VULGARIS*. 8.00; glossy black streaked and spotted with white and buff, fig. 261. Europe; accidental in Greenland; introduced about N. Y. city.



CC, C, a, 1. 1-10.

E. ORIOLES. *Icteridae*.

Birds of varying sizes but with the bill more or less pointed and with the lower mandible swollen at base. Eggs, usually bluish, lined with black.

a. Meadow Larks. *Sturnella*.

Bill, long and flattened at tip, wings long; tail, short; feet, large.

1. MEADOW

LARK, *S. MAGNA*.

10.40; reddish-

brown above

streaked with

dark-brown; yel-

low beneath, black

crescent on breast; outer tail feathers, white, fig. 262. East-

ern U. S. from Canada to Fla. Winters from Mass. southward.

Comes north in March, south in Oct. Frequents open fields.

Nests on ground; eggs, white, spotted with brown. Call song,

"*You can't see me*" rather high and prolonged; a sharp chatter

when alarmed; a song, rarely heard, often, possibly al-

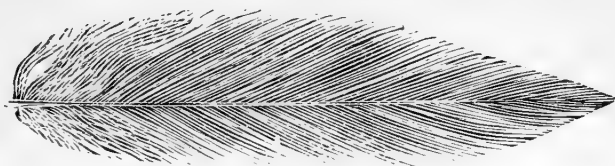
ways, given on the wing, consisting of a continuous sweet

warble. Flight direct, with rapid downward wing-beats,

sometimes sailing.

Fig. 261.

Fig. 260.



CC, C, a, 3.

Fig. 262.



CC, D, a, 1. 1-4.



CC, E, a, 1. 1-5.

1*. FLORIDA MEADOW LARK, *S. M. ARGUTULA*.

Smaller than 1 and much darker above and more yellow be-

low. Fla. and Gulf Coast to La. Call song, shorter and not

as loud as 1, "*See me hear*" rather plaintively given. Occurs

in open savannas and pine woods.

2. WESTERN MEADOW LARK, *S. NEGLECTA*. Differs from 1 in being much paler, the light areas on tail and wings touching shafts of the feathers. Western U. S. east to Ill. Sings often both while sitting and when flying.

b. Red-winged Starlings. *Agelaius*.

Bill, slightly flattened, wings and tail rather long; black with red patch on wing. Nests in marshes and swamps.

1. RED-WINGED BLACKBIRD, *A. PHOENICEUS*. 9.00; scarlet of wing bordered with pale buff, plate 17, A. Female, smaller, streaked with brown and buff. Young male, like female, gradually assuming the male dress. N. A. from Great Slave Lake to Fla.; winters from the Carolinas southward; goes south in Oct., comes north in March. Frequents open, marshy sections; gregarious. Nests, placed in bushes or in tussocks; eggs, bluish, lined with black. Notes, a sharp chuck, a squealing cry, a chatter, given by both sexes, and the "*Oker-reee*" song of the male. Males and females do not associate, excepting to breed.

1*. FLORIDA REDWING, *A. P. FLORIDANUS*. Differs from 1 in being smaller with a longer, more pointed bill; black darker and plumage softer; buff margin of red on wing deeper; female, rather more pinkish on throat, plate 17, B. Florida and Gulf Coast to Texas. Song, shorter than 1, like "*Creee*".

2. BAHAMA REDWING, *A. BRYANTI*. Differs from 1* in being even darker with longer bill, plate 17, C. Female, much paler. Many of the Bahama Islands; casual in southern Fla. on the keys (Ridgway). Song more husky than 1*.

c. Troupials. *Icterus*.

Rather large orioles with very pointed bills and striking colors.

1. TROUPIAL, *I. ICTERUS*. 9.50; black; patch on wing, broad collar on hind neck, upper back, and beneath behind chest, orange; patch and stripings on wing, white. Northern

S. A.; introduced into Jamaica and other of the West Indies. Accidental at Charleston, S. C. (Audubon). Song, a series of loud, clear whistles.

d. Tricolored Orioles. Yphantès.

Medium sized orioles usually conspicuously marked with orange, black, and white. Nests in trees, woven and pendulous.

1. BALTIMORE ORIOLE, *Y. GALBULA*. 7.60; orange; head, upper breast, back, wings and band on tail, black; bar and streakings on wings, white, fig. 263. Female duller without black on tail. Breeds in eastern N. A. from Va. north to Canada; comes north in May, goes south in Sep. Song, loud, clear, distinct whistles, but very variable, given in full only in May and June; heard somewhat shortened in late Aug. and early Sep. Has a scolding chatter when annoyed; the young utter a monotonous piping after leaving the nest in July. Common about farm houses and in country villages.

Fig. 263.



e. Black-tailed Orioles.

CC, E, d, 1. 1-3.

Pendulinus.

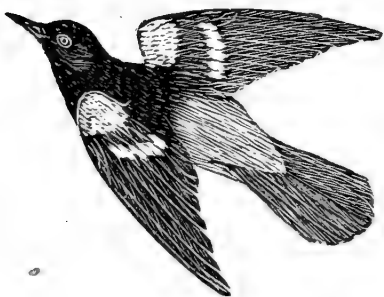
Medium sized or small orioles with the tail without bright markings and either wholly black or with some white. Nests as in .

1. ORCHARD ORIOLE, *P. SPURIUS*. 6.70; tail, black; chestnut bar on wing, otherwise the black and white markings are about as in d, 1, but the orange is replaced by chestnut, fig. 264. Female greenish with the white markings of the male. Young male like female, gradually assuming the male dress. Eastern U. S. from Fla. north to Mass., where it is rare, common south of this. Nests made of grass woven

when it is green, it then bleaches. Song, softer and rather more musical than d, 1. Migrates north in May, south in Sep.

f. Yellow-headed Blackbirds. *Xanthocephalus*.

Fig. 264.



Rather large birds with thick, but pointed bills, quite long tails and wings.

1. YELLOW-HEADED BLACKBIRD, X. XANTHOCEPHALUS. 10.50; dull black; head, mostly yellow; small white patch on wing, fig. 265. Female duller, no white on wing. Young male, like female but has white on wing.

CC, E, e, 1. 1-4.

Western U. S. east to Ill.; casual in Mass., Pa., Md., W. Va., District of Columbia, S. C. and Fla. Song, a wheezy squeak. Largely resident.

Fig. 265.

g. Rusty Blackbirds. *Scolecophagus*.

Rather slender, medium sized birds, wholly black with greenish iridescence, becoming rusty or grayish in autumn; wings, long; tail, long and somewhat rounded; bill, somewhat curved; irides, yellowish-white.



1. RUSTY BLACKBIRD,

CC, E, f, 1. 1-5.

S. CAROLINUS. 9.50; bill, slender, iridescence of head not different from body, fig. 266; tips of feathers rusty in autumn. Female, grayish. Eastern N. A. from northern N. E. northward; winters on the Gulf Coast; goes south in Sep., north in March. Common. Nests in bushes.

2. BREWER'S BLACKBIRD, *S. CYANOCEPHALUS*. Differs from 1 in having a thicker bill, fig. 267; iridescence of head violet; tippings of feathers in autumn, grayish; female not as gray. Western U. S. and British Provinces, during migrations east to Ill., La., and casually to S. C.

Fig. 266.

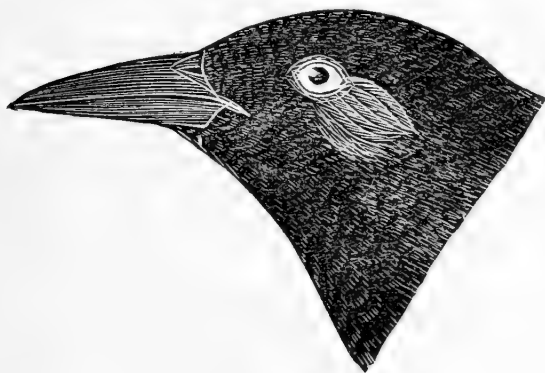


h. Grackles. *Quiscalus*.

Larger with long wings and very long, somewhat graduated tails, which can be made boat-shaped; large, curved bills; black, highly iridescent. Females a little smaller and duller; gregarious at all times. Nest in communities, on trees or bushes. Notes, harsh and grating, not unlike the creaking of a rusty hinge; alarm, a rather soft chirp.

CC, E, g, 1. 1-6.

Fig. 267.



CC, E, g, 2.

pied by 2 and 3; winters in the Southern States. The original form which, coming from the southwest, spread slowly over the section which it now occupies after the close of the glacial period, hence the most staple species. Migratory;

1. BRONZED GRACKLE, *Q. AENEUS*. 12.50; body above and behind chest below, uniform bronzy or brassy without admixture of other tints; head, neck and chest varying from greenish-blue to purple, fig. 268. Temperate N. A., east of the Rockies, excepting the region occu-

south in Nov., north in Feb. Note, "*Chat*" varied by "*We-chat*", harshly given.

Fig. 268.



CC, E, h, 1. 1-5.

2. FLORIDA GRACKLE, *Q. AGLAÆUS*. Smaller than 1, excepting bill and feet, which are as large or larger; the parts that are bronzy in 1 are greenish and are mixed and somewhat barred with violet and blue; head and wings bluish and violet. Fla. and along the Gulf Coast to La. This was the first form to become separated from 1 (as it spread north-east) and, adapting itself to the environment, early became much as it now is, hence on account of its specific age is nearly as staple as the ancestral stock. Resident.

3. PURPLE GRACKLE, *Q. QUISCALA*. Size and form of 1 with much of the colors of 2 but averaging less bright and exceedingly variable. Atlantic Coast region east of the Alleghanies from the northern shores of Long Island Sound and lower Hudson Valley to Ga.; migratory as in 1. This is a later form which has become separated from the ancestral stock, 1, and changed to what it now is by its environment. It probably found its way to the coast south of the Alleghany

Mountain range as an offshoot from 1, and followed the retreating ice of the glacial period up the coast where it would have been barred from mingling with the parent stock to the westward by the high and cold mountain range. Shows its instability not only in its variability but by an inclination to return to its ancestral color characters when placed under environment similar to that in which 1 lives, as in some portions of southern N. E. [Note:- For theory concerning migration of birds see a report of a lecture given by C. J. Maynard before the Boston Scientific Society in the "Boston Commonwealth" Nov. 30, 1895, and a longer account in "Contributions to Science" Vol. III, No. 1, March, 1896; also a continuation of the same in No. 2 wherein the relationship of these Grackles is discussed at greater length.]

i. Boat-tails. *Megaquiscalus*.

Differ from **h** in being larger, with longer, more strongly graduated tails; males nearly uniform iridescent black and the females brownish. Nests in marshy places.

1. BOAT-TAILED GRACKLE, M. MAJOR. 16.00; iridescence of head, neck and upper breast bluish-violet; bluish-green elsewhere, fig. 269. Female reddish-brown, darkest above. Young, both sexes similar to female. South Atlantic and Gulf Coasts of U. S. from Va. to Texas. Song, a series of sharp, loud notes given rapidly, as a kind of chatter, this is sometimes preceded by a single, more mellow, note; also makes a shuffling sound which may be produced by the wings, and a sharp croak when annoyed. The sexes do not, as a rule, associate unless breeding. Occur in open, marshy places. Very abundant.

j. Parasitical Blackbirds. *Molothrus*.

Small blackbirds nearly uniform in color; bill, short. conical; wings, rather long, tail not long and slightly rounded. Our species is polygamous, and deposits its eggs in the nests of other birds.

1. COWBIRD, *M. ATER*. 7.80; greenish-black; head, neck, and upper breast, chocolate-brown, fig. 270. Female, grayish-brown above, lighter below; nestlings, both sexes, similar to female, moulting at once into adult dress. Breeds from Ga. northward throughout temperate N. A.; winters in Mexico and southward; goes south in Oct.; comes north in April. Flight, very swift and winding. Gregarious in autumn, often alighting about cattle. Song, "*Sweet su-sie*" very sweetly given in a liquid tone; this is rarely heard the usual song being a kind of wheezy, double croak, given



CC, E, i, 1. 1-6.

while the bird ruffles his feathers and bows his head, also a prolonged whistling cry more often emitted when flying, and a blackbird-like chirp. An interesting species.

k. Rice Buntings. *Dolichonyx*.

Finch-like birds with short, conical bills, long wings and not long tails having stiffened, pointed feathers. Nest on ground. Food, seeds and insects.

1. BOBOLINK, *D. ORYZIVORUS*. 7.50; spring male, black; yellowish-white patch on back of head and whitish markings above, fig. 271. Female, yellowish-buff streaked above and on sides with dusky, fig. 271. Male in autumn and winter similar to female. Breeds from the Middle States northward into the British Provinces, west to Utah. Winters

Fig. 270.



CC, E, j, 1. 1-5.

in northern S. A.; goes south in early Oct.; comes north in early May. Frequents meadows and moist, grassy fields; gregarious when migrating. A well known rollicking song, a blackbird-like chirp, and a metallic clink when migrating.

Fig. 271.



CC, E, k, 1. 1-4.

F. SPARROWS AND FINCHES. *Fringillidae*.

Rather robust birds of varying sizes, but never very large, having conical bills, which are deeper at the base than one-half the length and have the cutting edge of upper mandible angled, consult diagram on page 8 for these and other characters. A wide spread family with numerous species.

a. Silk Buntings. *Spiza*.

Medium sized sparrows with rather thick bills, long pointed wings and nearly square tails. Streaked above not below.

Fig. 272.



CC,

1. 1-4.

1. BLACK-THROATED BUNTING, *S. AMERICANA*. 6.75; ashy-yellow above; streaks, dusky; white beneath; yellow on breast and under wings; black spot on throat, fig. 272. Female duller. Breeds in U. S. between the Alleghanies and the Rockies, now rare in the eastern section. Winters in Mexico and Central America. Nests in trees and bushes; eggs, 3 to 5, bluish-green, unspotted. Song, a lisp-ing twitter.

b. Arboreal Sparrows. *Spizella*.

Small sparrows streaked above, plain be-

low; our common eastern species have red crowns; bill, rather small; tail, slightly forked.

Fig. 273.



Nests in trees and bushes. Nestlings, streaked below. Young, streaked on crown. Food, chiefly seeds.

1. CHIPPING SPARROW, *S. SOCIALIS*. 5.50; head in strong contrast with gray of neck above; distinct dark line through eye; gray below; wing bands, not conspicuous, fig. 273. Breeds throughout eastern N. A. from Canada south to the Gulf Coast, west to the Plains; winters in southern U. S.; goes south in Oct., comes north in April. Frequents open sections, often near settlements.

CC, F, b, 1. 1-3.

Song, a thin, quickly given, wiry trill; a low, rather sharp chirp of annoyance. Nest, of fine rootlets, lined with horse hair, eggs, bluish, spotted and lined with black. Abundant.

2. TREE SPARROW, *S. MONTICOLA*. 6.50; head not in very strong contrast with neck; wing bands conspicuous; sides of head, plain grayish; under mandible, yellow; dark spot on middle of breast; chestnut patch on its sides, fig. 274. Breeds in eastern N. A. from Labrador northward; winters from N. E. to S. C. South in late Oct.; north in late April. Common. Frequents the margins of woodlands and thickets, venturing into weed patches in winter. Song, a clear chant, beginning with two

Fig. 274.



CC, F, b, 2. 1-4.

or three loud notes, falls to other lower notes and ends with a low, sweet warble; in autumn and winter gives a low murmuring, warbling song. Nests in trees; eggs, pale-blue, spotted with reddish.

Fig. 275.



3. FIELD SPARROW, *S. PUSILLA*. 5.90; top of head uniform with back; sides of head beneath, yellowish-gray; bill, red; tail, long, fig. 275. Breeds in eastern N. A. from Ga. north to the southern British Provinces; winters in southern U. S.; south in Oct.; north in April. Common on brushy or cedar-covered hillsides.

Song, begins with two or three single notes then continues with a constantly diminishing trill which ascends, is a monotone, or descends; very sweetly given and appeals to all who love bird music. Chirp of alarm, rather sharp. Nests, often in low bushes, sometimes on the ground, of weeds, grass, etc.; eggs, pale blue spotted with reddish.

CC, F, b, 3. 1-3.

3*, WESTERN FIELD SPARROW, *S. P. ARENACEA*. Differs from 3 in having wings and tail longer; grayer above; crown with median line; paler below. Western portion of Great Plains; south in winter to Texas, casually to eastern La.

4. CLAY-COLORED SPARROW, *S. PALLADA*. 5.65; crown, streaked; ear coverts brown in contrast with buff of sides of head; buffy brown above streaked with dark-brown. dull white beneath; bill, pale brown. Breeds on the Great Plains from north-western Ill. west to the Rockies; in winter south into Mexico, rare during migration in western Ind. and Mich.

5. **BREWER'S SPARROW**, *S. BREWERI*. Differs from 4 in having sides of head uniform buff and in being more narrowly streaked above. Western U. S. in winter south to Mexico; accidental in Mass.

c. Zone-throated Sparrows. *Zonotrachia*.

Large sparrows with rather long, pointed wings and long, somewhat rounded tail; streaks above but none below; throat, nearly white or lighter than other lower parts (See 4 for exception); crown, marked with black; distinct white wing bands. Nests on ground; eggs, pale bluish much spotted with brown.

1. **WHITE-THROATED SPARROW**, *Z. ALBICOLLIS*. 6.35; reddish above; white of throat in strong contrast with gray of breast; yellow line from over eye to bill, white be-

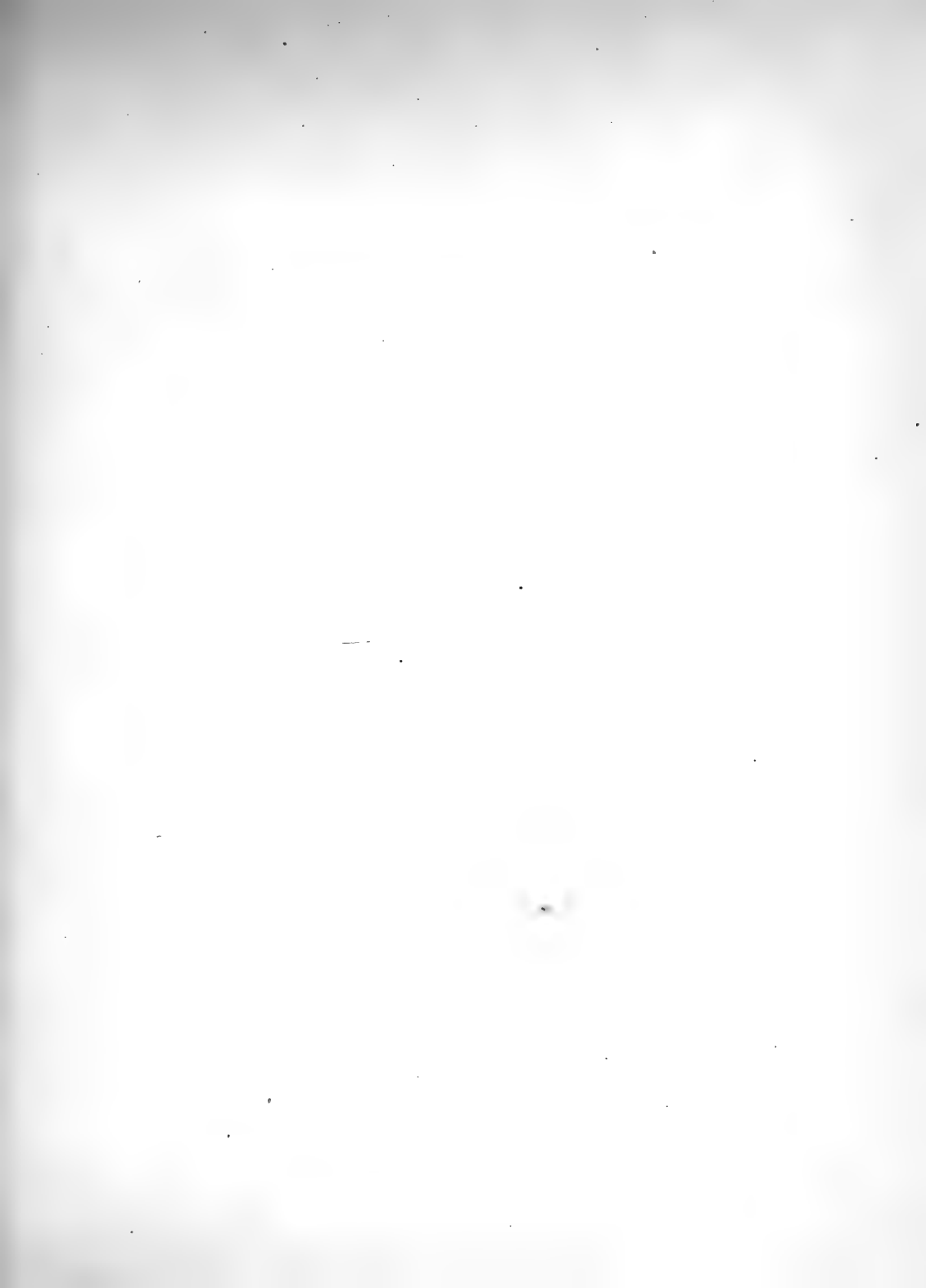
Fig. 276.

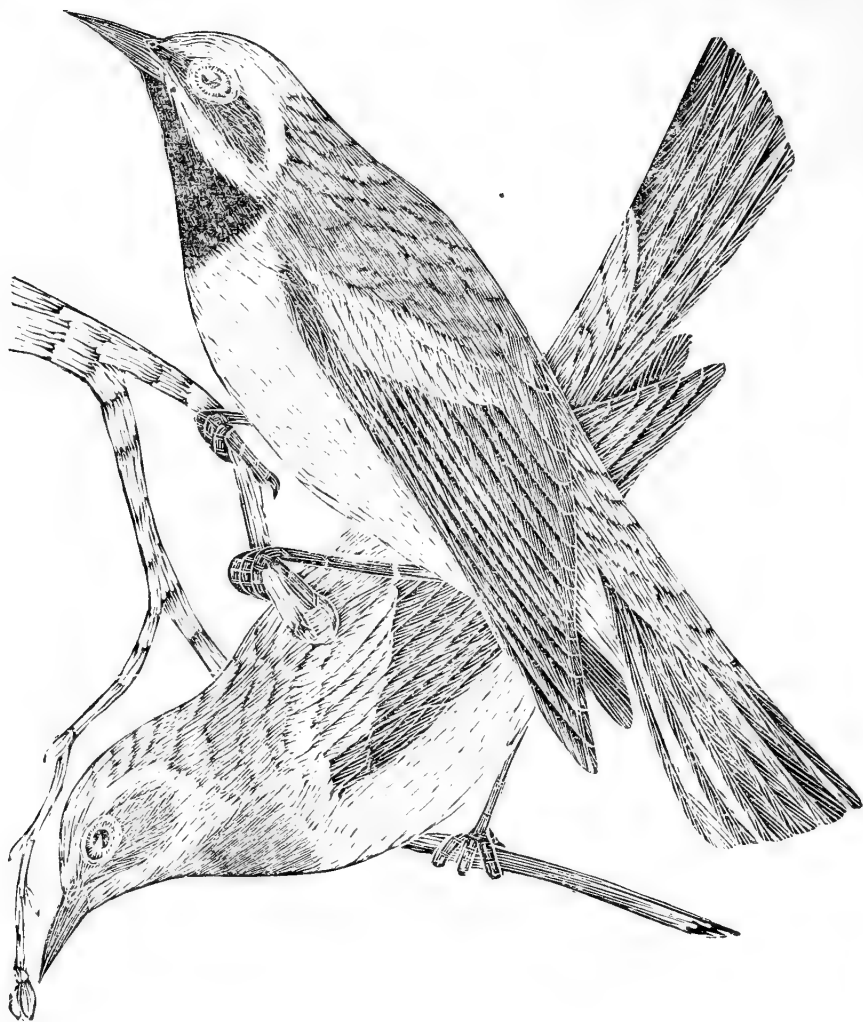


hind; crown, black; median line, white, fig. 276. Breeds in eastern N. A. from the mountains of Mass. north to Hudson Bay; winters from Mass. (not commonly) south to Fla.; comes north in April; goes south in Oct. Frequents the margins of woodlands and thickets near the ground. Song, a series of prolonged, sweet whistles, frequently given at night on the breeding ground; alarm, a sharp chirp. Common; somewhat gregarious.

2. **WHITE-CROWNED SPARROW**, *Z. LEUCOPHRYS*. 7.00; grayish above; no yellow about head; white of throat grading into gray of breast without

CC, F, c, 1. 1-3. strong contrast; head with three distinct white stripes; bill, deep red, fig. 277. Young, with top of head reddish with lines of reddish-buff. Breeds in eastern N. A. from northern N. E. northward through Labrador to to southern Greenland; goes south in Oct.; north in May.





GOLDEN-WINGED WARBLER.

Frequents open sections near thickets. Song, notes much

Fig. 277.



shorter than 1 and given more quickly, something like those of the Vesper Sparrow, which see.

3. GOLDEN-CROWNED SPARROW, *Z. coronata*. Differs from 2 in being grayer, especially on throat, and in having the median line on crown yellow and wider. Breeds in the northern Pacific Coast Region, migrating south in winter as far as Lower California; casual during migration in Wis.

4. HARRIS'S SPARROW, *Z. querula*. Differs from 3 in being a little larger, in having the top of head and throat black, and the lower parts white elsewhere. Interior plains of N. A.; in

CC, F, c, 2. 1-3. winter south to Texas; during migration east to Wis. and Ill.

d. Song Sparrows. *Melospiza*.

Sparrows of varying sizes with short, rounded wings and long, rounded tails streaked on both surfaces. Frequent thickets, into which they dart when disturbed. Flight, weak and erratic. Nests on the ground or in bushes; eggs, similar to c.

1. SONG SPARROW, *M. melodia*. 6.40; reddish above, white below where the streaks accumulate to form a central spot on breast and on lower jaws, fig. 278. Breeds in eastern N. A. from Va. north to the Fur Countries; winters from Mass. to Fla.; comes north in March; goes south in Nov.; abundant. Song, variable, but typically begins with three detached notes, runs into a warble, and ends with two notes; a summer variation is "*Be-e-e-e wretched*", the first portion being given slowly, the "*wretch-ed*" rapidly with the accent

on the "ed"; alarm chirp, soft. Occurs in scattering flocks in migration, often with other sparrows; is especially fond of bushes which border water.

Fig. 278.



2. LINCOLN'S SPARROW, *M. LINCOLNII*. 5.50; more slender than 1; bill, smaller, paler red above, buff band across breast; streakings, finer, fig. 279. Breeds throughout N. A. chiefly north of the U. S.; winters in Panama; goes south in Oct.; north in May. Not very common in N. E. Song, low, prolonged, varied and pleasing. Frequents thickets, often near water.

3. SWAMP SPARROW, *M. GEORGIANA*. 5.70; bill more slender than 1; top of head wholly reddish-brown; back and wings with a much richer under tinting of reddish-brown and with darker streakings; beneath, grayish across breast with the streakings faintly indicated, fig. 280. In winter and young,

CC, F, d, 1. 1-3. with top of head more or less streaked and streakings below more distinct. Breeds in eastern N. A.

Fig. 279.



CC, F, d, 2.

Fig. 280.



CC, F, d, 3. 1-3.

from Mass. north to Labrador and Newfoundland; winters from Middle States south to Fla., less commonly north to Mass.; south in Oct., north in April. Frequents swampy thickets which border large marshes. Very common. Song a rather musical trill; in autumn a low, murmuring warble. Nests on tussocks in open marshes.

e. Rufous Sparrows. *Passerella*.

Large sparrows with rather long wings, long, slightly rounded tails, strong bills, and large feet; heavily streaked above and below.

1. FOX-COLORED SPARROW, *P. ILIACA*. 7.25; reddish-yellow and ashy above, brightest on tail; white beneath where markings are reddish, streakings accumulate as in d, 1, those in center of breast being dark, fig. 281. Breeds from the islands about the Gulf of St. Lawrence northward; (less commonly in northern Me.) to the Arctic regions; winters from southern N. E. to Fla.; south in Oct.; north in April. Common. Frequents thickets, feeding on the ground, scratches much among the leaves, etc. Song, begins loud and clear with three double notes ending with two. the last accented, "*Wil-lie wil-lie wil-lie work you*" one of the finest of our sparrow songs. Nest on ground; eggs, pale blue heavily spotted with reddish-brown.

f. Ground Buntings. *Pipilo*.

Large Fringiline birds with long tails, short wings, and large feet, which live mostly upon the ground in thickets; nests on ground; eggs (of our species), pale blue thickly spotted with reddish-brown.

1. RED-EYED TOWHEE, *P. ERYTHROPHthalmus*. 8.00; upper parts, lower neck, and upper breast, black; sides, reddish-brown; few markings on wings, tips of outer tail feathers, and middle parts beneath, white; iris, red, fig. 282. Female, black replaced by brownish. Breeds from southern British Provinces south to Gulf Coast, winters from Middle States (rarely north to Mass.) to Fla.; south in Oct.; north in

May. Common. Song, uttered when perching high, two abruptly given, accented notes followed by a prolonged trill,
 Fig. 281. Fig. 282.



CC, F, e, 1. 1-3.



CC, F, f, 1. 1-4.

"*Drink your te-e-e-e*"; a loudly and sharply given "*Towhee*" when annoyed which is sometimes interpreted as "*Che-wink*" by which name the bird is sometimes known. Frequently scratches among fallen leaves in dry thickets.

2. FLORIDA TOWHEE, *P. ALLANI*. A little smaller than 1; less white on tail and wings, paler reddish on sides; black inclined to be slaty; iris, white or yellowish-white. Florida. Song, shorter and more quickly given; alarm note, "*Fo-ree*."

3. ARCTIC TOWHEE, *P. ARCTICUS*. Differs from 1 in being grayer above, paler on sides, more white on wings and tail, and streaks of white on sides of back. Great Plains to the Rockies, east casually to Wis.

g. Snowbirds. Junco.

Small sparrows with long, pointed wings and moderately long tails; bills, rather small; dark, often slaty, above; white below, adults unstreaked on either surface; young, streaked above and below; outer tail feathers, white.

1. SLATE-COLORED JUNCO, *J. HYEMALIS*. 6.25; dark slaty throughout excepting nearly black on head, middle portions beneath, and on outer tail feathers, the line of

demarkation between the white and slate of breast being sharply defined; bill, pink, fig. 283. Female, duller. Breeds from the mountains of Penn., Mass., and N. Y. northward to the Arctic Coast; winters from Mass. south to northern Fla.; south in Oct.; north in April. Nests on ground; eggs, pale blue, finely spotted with reddish-brown. Frequents the neighborhood of thickets and woodlands. Song, a musical, tinkling trill; in winter and early spring, a low, more musical warble; note of annoyance, a sharp chirp, given double when much alarmed. Flight, rapid and darting, but somewhat erratic. Common.

2. CAROLINA JUNCO, *J. CAROLINENSIS*. Differs from 1 in being larger, with larger bill, lighter above, head nearly like back; young, more narrowly streaked and darker on breast and sides. Breeds in the higher portions of the southern Alleghanies from Va. south to northern Ga.; in winter, descends to the surrounding lowlands.

3. MONTANA JUNCO, *J. MONTANUS*. Differs from 1 in being a little smaller; brownish patch on back; sides and flanks, purplish-cinnamon; general tinting above, grayer. Breeds from northwestern Montana and northern Idaho, north to Northwest Territory; winters from Ariz. south to Tex. and northern Mexico; straggling eastward to Kan., Ill., Mich., Ind., Mass., and Md.

Fig. 283.



CC, F, g, 1. 1-4.

Fig. 284.



CC, F, h, 1. 1-4.

4. GRAY-HEADED JUNCO, *J. CANICEPS*. Differs from 1 in being uniform gray above; patch of reddish-cinnamon on back. Breeds in the mountains of southern Wyo., Utah, Nev., and northern N. M.; winters in surrounding lowlands and southward to northern Mexico; accidental in Mich.

h. Woodland Sparrows. *Peucaea*.

Small or medium sparrows with short, often truncate, wings and rather long, graduated tails; streaked above, but unstreaked below.

1. PINE-WOODS SPARROW, *P. ASTIVALIS*. 5.70; gray above thickly streaked with chestnut, darkening to brown on middle of back; white below; throat, breast, and sides, dull buff, fig. 284. Young, more reddish above and narrowly streaked on breast with dusky. Partly resident, but many migrate southward in winter. Frequents the flat, grassy pine woods. Flight, low, fluttering and erratic; keeps much in the grass, through which it runs nimbly, and is quite difficult to start. Song, given when perching on the lower limb of a tree, or on a stump, a prolonged, rather sweet trill ending with a series of chirps or a harsh trill.

1*. BACHMAN'S SPARROW, *P. A. BACHMANI*. A little larger than 1, more buffy above; streakings more reddish, and clearer buff beneath. Breeds from S. C., northern Ga. and the Gulf Coast west of Fla. north to southern Va., southern Ind., and southern Ill.; south in winter to Fla.

i. Buffy Sparrows. *Coturniculus*.

Small sparrows with short, truncated wings, short, graduated tails with narrow, pointed feathers, with a buffy under tint; crown, with central stripe of buff.

1. GRASSHOPPER SPARROW, *C. PASSERINUS*. 5.15; ashy above streaked with reddish and brown; edge of wing and line over eye to bill, yellow; middle lower parts, white, fig. 285. Young, and winter adults narrowly and obscurely streaked across breast with reddish. Breeds in eastern U. S.

from the Middle States north to southern Ontario; winters in Fla. and some of the West Indies: south in Sep.; north in May. Nest, placed on the ground; eggs, white, spotted with reddish-brown. Frequents sandy fields if grassy, hence of local distribution. Flight, fluttering and direct; runs nimbly through grass and is difficult to start. Song, given as the bird perches on some slight elevation, a feeble, stridulating trill, inaudible a few yards away.

2. FLORIDA GRASSHOPPER SPARROW, *C. AUSTRALIS*. Smaller than 1, lighter in buffy tints but with the browns darker. Young and winter adults more distinctly streaked on breast. Fla.; southern portion of state and Bahamas in winter.

Fig. 285.



CC, F, 1. 1-4.

Fig. 286.



CC, F, i, 3. 1-4.

3. HENSLOW'S SPARROW, *C. HENSLOWII*. More slender than 1; back and wings more red; head and neck above, greenish; distinct dusky streaks across breast and on sides; no yellow over eye, fig. 286. Breeds in eastern U. S. from the Middle States northward; winters from its southern range to middle Fla.; south in Sep.; north in May; of local and rather uncommon occurrence in N. E. Frequents marshy lands in summer; grassy savannas in winter. Flight, much like 1. Song, feeble, "Se-e-e wick" the first notes prolonged, the last given quickly and accented.

4. **LECONTE'S SPARROW**, *C. LECONTEII*. 5.00; more slender than 3; head and hind neck, buff, the latter streaked with chestnut, more buff beneath; edge of wing, white, fig. 287. Breeds in the prairie marshes of the upper Mississippi Valley north into the British Possessions; winters in the Southern States from S. C. to western Fla. Habits, similar to 3.

j. Marsh Sparrows. Ammodramus.

Slender sparrows differing from *i* in having longer and more slender bills, rather larger feet, and in being more heavily streaked beneath. Nests, often on the ground; eggs, pale blue spotted with brown. Flight, low and direct with rapid wing-beats.

Fig. 287.



CC, F, i, 4. 1-3.

Fig. 288.



CC, F, j, 1. 1-3.

1. **SEASIDE SPARROW**, *A. MARITIMUS*. 5.50; greenish gray above obscurely streaked with darker; line from over eye to bill and edge of wing, yellow; white beneath, reddish-buff of breast, sides and under tail coverts rather obscurely streaked with gray; sides of head, gray; a dusky maxillary line, fig. 288. Salt marshes of Atlantic Coast of U. S., breeding from southern N. E. to Ga.; winters from the Carolinas southward. Abundant. Frequents the tall grasses of the marshes which are submerged by the tides, nesting on the dry marshes, sometimes on the ground but often fastened to

grass stems or placed in low bushes. Song, a low twitter, given as the bird hovers low over the grass.

1*. MACGILLIVRAY'S SEASIDE SPARROW, *A. M. MACGILLIVRAII*. Differs from 1 in being darker, with back distinctly streaked with black and the streaks beneath are broader. From Charleston S. C. to eastern Fla. breeding on Anastasia Island; in winter along the Gulf coast to La.

2. SCOTT'S SEASIDE SPARROW, *A. PENINSULAE*. Differs from 1 in being more uniformly colored above with no prominent streakings; grayer below with the streakings extended often encroaching upon the throat. Breeds in western Fla. from Tarpon Springs to Cedar Keys, in March. Song, four notes; the first two low and quickly uttered with a distinct articulation, the last two more connected, more prolonged with a decided accent, the song somewhat resembling that of a Red-winged Blackbird and the bird bows his head, spreads his tail, and ruffles his feathers much as does the Red-wing; the song is given as the bird sits low in the grass.

3. FISHER'S SEASIDE SPARROW, *A. FISHERI*. Differs from 1* in being much darker; more black above; the breast and sides deep buffy. Breeds on the coast of La.; in winter along the west coast of Fla. to Tarpon Springs.

4. DUSKY SEASIDE SPARROW, *A. NIGRESCENS*. Differs from 1 in being black above indistinctly streaked with grayish; white beneath broadly streaked everywhere with black. Merritt's Island and shores of Banana and Indian Rivers north to the old Haulover Canal and about Salt Lake, upper St. Johns River, east Fla. Frequents dry marshes. Song, and manner of singing, like 1. Common. Resident.

5. SHARP-TAILED SPARROW, *A. CAUDACUTUS*. 5.50; sides of head, deep buff; spot below eye, gray; paler buff beneath excepting middle of body which is white, much streaked on sides and across breast with dark-brown; top of head, dark-brown, with a median line of gray; upper parts, mixed olive-brown, ashy, and buff, fig. 289. Breeds on the Atlantic coast of U. S. from Mass. south to northern Fla.; winters

from the Carolinas southward to northern Fla.; casually as far as Mass.; south in Oct.; north in May.

Fig. 289.



Frequents rather dry marshes. Song, a very feeble twitter given as the bird hovers over the grass. Abundant.

6. NELSON'S SPARROW, *A. NELSONI*.

Smaller than 5, especially bill; brighter in color; streakings above more sharply defined; those below paler, often grayish. Breeds on the prairie marshes of the Mississippi Valley from northern Ill. north to Manitoba; winters along the Gulf coast from Texas east to the coast of S. C., occas-

CC, F, j, 5. 1-4. ionally at this season and during migration as far north as the coast of Mass. Time of migration as in 5.

7. ACADIAN SHARP-TAILED SPARROW, *A. SUBVIRGATUS*. Differs from 5 in being more plainly marked, the back without conspicuous lighter streaks; sides of head, pale-buff; paler buff beneath. Breeds on the Atlantic coast of the British Provinces from the mouth of the St. Lawrence southward, occasionally to the coast of Me. Winter range and time of migration as in 5.

k. Grass Sparrows. *Passerculus*.

Small sparrows with long, broad wings, inner secondaries nearly, or quite as long as primaries; rather short, quite square tails, with feathers somewhat pointed; conspicuously streaked above and below. Nest on ground; eggs, much as in d. Frequent open sections of country.

1. SAVANNA SPARROW, *P. SAVANNA*. 5.75; grayish-buff above with the dark-brown streakings sharply defined; crown with median line of buff; sides of head buff with a dark spot having a lighter center below eye; line from over eye to bill, and edge of wing, yellow; white beneath, streakings arranged much as in d, 1; feet, pale brown, fig. 290. Eastern N. A., breeding from the Middle States north to Hud-

son Bay, more commonly in N. E. on the coast; winters from the Carolinas to Fla. and rarely in the Bahamas; casually north to Mass.; south in Oct.; north in April. Flight, swift and darting, but not direct; never takes refuge in a thicket; runs nimbly through grass where it hides. Song, a series of feeble, grasshopper-like notes followed by a low warble given as the bird perches at a slight elevation.

Fig. 290.



CC, F, k, 1. 1-3.

2. IPSWICH SPARROW, *P. PRINCEPS*. Larger than 1, 6.25; inner secondaries longer, as long as primaries; paler, about sand-color, with streakings not as well defined. Breeds on Sable Island off Nova Scotia; winters south to N. J., casually to Ga.; south in Oct.; north in April. Frequents the sand dunes of the coast. Common.

1. Bay-winged Sparrows. *Pooaetes*.

Differ from *k* in being grayer, having white outer tail feathers, streakings below confined chiefly to breast, and crown undivided.

1. VESPER SPARROW, *P. GRAMINEUS*. 6.25; differs from *k*, 1 in being much grayer and in showing the white outer tail feathers in flight.



CC, F, 1, 1. 1-4.

Breeds in eastern U. S. from the Middle States north to southern Canada, winters from the Carolinas to Fla., rarely as far north as Mass; south in Oct.; north in April. Frequents open fields and pastures

on uplands where there is scanty herbage; runs much on ground; unsuspicious. Song, given at an elevation, two short

notes followed by a fine clear warble, ending with three detached notes. Flight, like **k**, 1.

m. Prairie Sparrows. Chondestes.

Medium-sized, ground-inhabiting, sparrows with long pointed wings, and rather long well rounded tails; no streaks beneath.

1. LARK SPARROW, C. GRAMMACUS. 6.50; grayish-brown

Fig. 292.



above heavily streaked with black; crown, chestnut and black with a median line of gray; dull white beneath; black spot on breast; black markings on sides of head as in fig. 292; tip of tail, broadly white. Breeds in northern Mississippi Valley, migrating southward in winter

CC, F, m, 1. 1-4.

to Gulf coast; eastward rarely to Atlantic states north to Mass. Frequents open fields and cultivated lands, often in the vicinity of houses. Song, rich and clear, consisting of a series of liquid notes freely interspersed with trills.

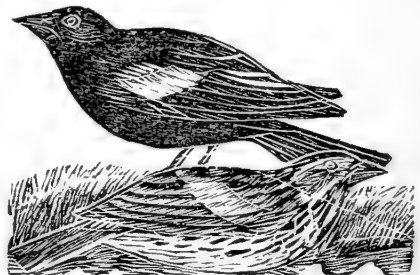
n. Black and White Sparrows. Calamospiza.

Rather large sparrows with large bills, long wings, rather long, square tails, and large feet; black with white markings; ground-inhabiting.

1. LARK BUNTING, C. MELANOCORYS. 6.00; black; large

Fig. 293.

white patch on wing and some white on tip of tail, fig. 293, upper figure male, lower female; female, winter male and young, brownish buff above streaked with dusky; white beneath, streaked with black; wings and tail as in male. Great Plains from Kansas north to Manitoba; winters south to



CC, F, n, 1. 1-3.

Mexico; accidental in migration in N. Y., S. C., and Mass. Song, sweet and varied as the bird hovers in air. Gregarious excepting when breeding. Flight, swift, strong and direct.

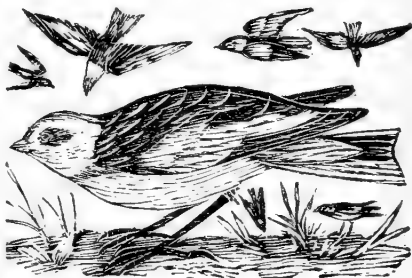
o. Snow Buntings. Passerina.

Good-sized, ground-inhabiting sparrows with very long, pointed wings, moderately long, square tails, and small bills; black and white; hind toe nail long.

1. SNOW BUNTING, *P. NIVALIS*. 6.65; white; back, middle wing and tail, black; bill, orange, fig. 294; in winter and young, tinged with reddish. Breeds in Arctic and sub-Arctic regions from northern Labrador northward; in N. A. migrating south in winter regularly to N. E., more rarely as far south as Ga.; south in Oct.; north in April. Gregarious

Fig. 294.

in winter, frequenting the sand dunes of the coast and open fields of the interior; flight, strong and swift, but very erratic; run swiftly on the ground; restless, flying often from place to place. Song, a sweet warble, given while hovering, seldom heard off the breeding grounds; in winter, a sweet single or double note, less often a quite melodious trill and a kind of chirring sound, all given when on the wing.



CC, F, o, 1. 1-4.

p. Longspurs. Calcarius.

Differ from o in having the color more varied, black, white and chestnut, streaked above; hind toe nail, longer.

1. LAPLAND LONGSPUR, *C. LAPPONICUS*. 6.10; dark-brown above streaked with buffy and chestnut; a distinct chestnut collar; buffy-white beneath; throat and spots on sides, black; sides, tinged with reddish; outer tail feathers with terminal spot of white, fig. 295. Female and young differ in having the back much obscured by whitish; duller.

Breeds in Arctic and sub-Arctic districts of Europe, Greenland and north-eastern N. A.; winters from N. E. south, somewhat irregularly to S. C.; common in N. E. from middle Oct. to Dec.; less common in winter; rare in spring. Song on

Fig. 295.



breeding ground, a rollicking, joyous melody, given when hovering; in autumn and winter, a call like o, 1, but rather more liquid; a harsh chirr given when starting to fly; flight, rather more steady than o, 1. Associate with Horned Larks and Snow Buntings, or gather in small flocks by themselves;

CC, F, p, 1. 1-4. occur in similar places.

2. **PAINTED LONGSPUR, C. PICTUS.** Differs from 1 in having the outer tail feathers white; entire lower parts deep, yellowish-buff; crown and sides of head, black; stripe behind eye, on middle ear coverts, and on lower jaw, white; white wing bar. Breeds on interior plains of N. A. from Great Slave Lake north to the Arctic coast; south in winter to Texas; east regularly to Ill. and northwestern Ind.; casually to S. C.

3. **CHESTNUT-COLLARED LONGSPUR, C. ORNATUS.** Differs from 1 in having top of head, spot on ear coverts, and beneath, black; throat, broad stripe over eye, and wing band, white. Breeds on the Great Plains of N. A. from Kansas north to the Saskatchewan; migrates south to Mexico and casually east to the coast of N. E. and Long Island. Song, short, shrill and sweet, given usually in flight.

q. Short-tailed Longspurs. Rynchophanes.

Differ from **p** in having a decidedly thicker bill and shorter tail; flight, undulating.

1. **MCCOWN'S LONGSPUR, R. MCCOWNII.** 6.00; front of crown, narrow line from bill to eye, and crescent on breast, black; brownish and buffy-gray above broadly streaked with dusky; outer portion of tail, white broadly tipped with black.



PLATE 19.



BREWSTER'S WARBLER.

Female without black of head or breast; buffy beneath. Breeding range and southward migration much as in p, 2; casual east to Ill.

r. Rosy Finches. *Carpodacus*.

Usually small, tree-inhabiting finches with long wings and moderately long, forked tails; bills, short and thick; males, partly crimson; females, gray; feathers of crown somewhat elongated.

1. PURPLE FINCH, *C. PURPUREUS*. 6.00; crimson-lake, brightest on crown, obscurely streaked with dusky on back; abdomen and under tail coverts white; bill, pale brown, fig. 296. Female and young, greenish-brown above, white below, heavily streaked with dusky; a prominent white line over eye, adult male dress not assumed the first year. Eastern N. A.; breeds from Penn. north to Hudson Bay; winters from Mass. to Fla. Common, less so now in eastern Mass.—than formerly. Frequents open country. Nests usually in cedar trees; eggs, blue spotted with black. Song, given also by the young male, and, at least occasionally, by the female, a continuous warble; sometimes given more rapidly and musically as the bird ascends in air and descends; a low, whispered melody given while in concealment; alarm, a sharp chirp. Flight, swift, direct, undulating, with a characteristic quiver to wings. In perching, CC, F, r, 1. 1-4. sit upright.

Fig. 296.



s. Pine Grosbeaks. *Pinicola*.

Large, tree-inhabiting finches with long wings and forked tails; bills, large and hooked; no streakings beneath. Nests, in trees; eggs, pale blue, dotted with black.

1. CANADIAN PINE GROSBEAK, *P. CANADENSIS*. 8.60; rosy-red; back, obscurely spotted with dusky; two white wing bands, fig. 297. Female,



gray; top of head and rump, bronzy-yellow. Young male, similar to female but more or less red, depending upon age. Breeds in northeastern N. A. from New Brunswick north to the limits of the coniferous forests; wandering south when the coniferous seed crop fails, to N. J., northern Ohio, Ind., and Ill.; casual further south. Occurs wherever it can obtain food, which, with us, consists of the fruit of the cedar, mountain ash, common ash, etc. Very unsuspicious. Song, a low, continuous, quite sweet,

CC, F, s, 1. 1-5. warble; call, a loud, clear, double note. Flight, swift, direct, and undulating. Gregarious in winter.

t. Redpolls. *Acanthis*.

Small birds with very short, pointed bills, long, pointed wings, and long, forked tails; streaked, often rosy; tree-inhabiting. Nests, in trees; eggs, pale blue dotted with black. Gregarious. Flight, undulating.

1. REDPOLL, *A. LINARIA*. Chord of upper mandible straight; ashy-white streaked above and below with dusky; crown, crimson; dusky spot on throat; anterior parts below and rump, rosy, plate 21. Female and young male, rosy tinting absent; less crimson on crown. Northern parts of northern hemisphere, breeding from the islands in the Gulf of St. Lawrence northward; south irregularly when one source of the food supply (seeds of birches) fails and another (weed seeds) is covered by deep snows, to the more northern U. S., rarely to Va. and northern Ala. Common. Come south in Nov.; go north in March or early April. Song, a sweet, melodious warble; call, a double note similar to that of the Goldfinch, but not as clear; a kind of chatter when flying.

1*. **HOLBOELL'S REDPOLL**, A. L. **HOLBOELLII**. Differs from 1 in being larger. Extreme northern portions of Europe, Asia, and N. A., wandering south in winter rarely as far as Mass., northern Ind., and Mich.

2. **GREATER REDPOLL**, A. **ROSTRATA**. Larger than 1; chord of upper mandible convex and bill heavier, fig. 298, A; streakings broader, rosy less extended. Resident in Greenland, wandering south in winter, irregularly and at wide intervals as far as Mass. (where sometimes common), N. Y., Mich., northern Ind., and northern Ill.

3. **GREENLAND REDPOLL**, A. **HORNEMANNI**. Larger than 1; very pale; rump, white, unstreaked; rosy tinting very pale. Resident in Greenland, Iceland, and Spitzbergen, wandering in winter irregularly to the region about Hudson Bay and casually to Ontario.

4. **HOARY REDPOLL**, A. **EXILIPES**. Differs from 3 in being much smaller (about the size of 1) and slightly darker; bill, very short; chord of upper mandible, concave, fig. 298, B. Circumpolar-continental districts, south irregularly in winter to the more northern U. S., Mass. (rare), Mich., and Ill.

Fig. 298.



5. **BREWSTER'S LINNETT**, A. **BREWSTERI**. Like an immature female 1 but differs in having no red on the crown, primaries and tail feathers edged with pale yellow, rump tinged with yellow. Known only from the type specimen taken at Waltham, Mass., Nov. 1, 1870.

u. **Siskins. Spinus.**

Differ from *t* in having the bill longer and more pointed; colors, black, white and yellow.

1. **PINE SISKIN**, S. **PINUS**. 5.25; grayish-white streaked with dusky; bases of wing feathers and tail, pale yellow, fig. 299. Breeds in the higher mountains of N. C., Penn., N. E., and northward through the coniferous forest districts of the British Possessions, wandering south with the failure of food

supply, similar to **t**, 1, as far as the Gulf Coast. Gregarious.

Fig. 299. Notes, not dissimilar to those of **t**, 1, but rather clearer.



v. Goldfinches. *Astragalinus*.

Differ from **u** in having the bill shorter and not as pointed. No yellow at the base of wing or tail feathers.

1. AMERICAN GOLDFINCH, *A. TRISTIS*. 5.60; bright lemon yellow; top of head, wings, and tail, black; two white wing bars and some white markings on tips of wing feathers, fig. 300. Female and winter male, greenish above, dull white below;

CC, F, u, 1. 1-4. wings and tail much as in summer (brown-er in female); young strongly tinged with buffy. Breeds in U. S. east of the Rockies north

into the southern British Possessions, southward along the mountains to Ga.; winters from Mass. to Fla. Frequents open country; gregarious in winter. Song, a continuous warble, very sweet, sometimes given as the bird flies in a circle; call, a single plaintive cry and a "*Per chick-cr-ry*" given when rising in its undulating flight. Nests often in willows or ornamental trees; eggs, pale blue, unspotted; breeds late in June.

Fig. 300.



CC, F, v, 1. 1-4.

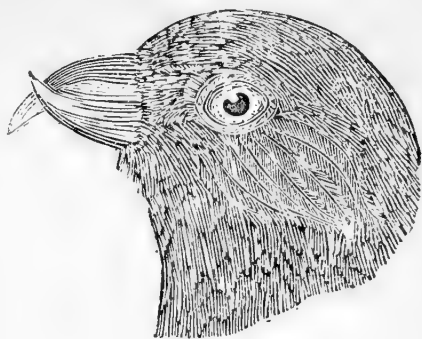
w. Crossbills. *Loxia*.

Medium-sized finches with bills crossed at tip, fig. 301; wings, long; tail, short and forked; tree-inhabiting. Nests, in trees; eggs, pale blue, dotted with black.

1. AMERICAN CROSSBILL, *L. MINOR*. 6.00; yellowish-red; wings and tail, dusky. Female and young male, greenish-gray; yellow on top of head; from this males grad-

usually assume the adult dress through a series of mixed plumages. Breeds in northern and eastern N. A. from the mountains of northern Ga. into the British Possessions, but irregularly as to season and locality; in winter wandering about irregularly according to the food supply. Flight, steady, swift and undulating. Gregarious. Song, a low, sweet warble; call, loud and clear, also give a murmuring chatter when feeding. Very unsuspicious.

Fig. 301.



CC, F, w, 1.

2. WHITE-WINGED CROSSBILL, *L. LEUCOPTERA*.

Differs from 1 in being more slender, bill not as stout; crim-

Fig. 302.



son; wings and tail, black, the former with a conspicuous patch of white, fig. 302. Female and young male, similar with intermediate plumages, but with white wing patch. Breeds in the coniferous forests of northern N. A. from the islands in the Gulf of St. Lawrence, Me., N. H., northern N. Y. and northern Mich., northward; in winter south irregularly (movements governed by food supply)

as far as District of Columbia, southern Ohio, central Ind., and southern Ill. Habits, song etc. much like those of 1 but feeds more often on weed seeds and is even more unsuspicious.

x. American Hawfinches. *Hesperiphones*.

Large tree-inhabiting, fringiline birds with very large bills, long wings, short tails and legs.

1. EVENING GROSBEAK, *H. VESPERTINA*. 7.60; forehead and broad line over eye, yellow; top of head black,

Fig. 303.



gradually changing through olive on back of neck and upper back to clear yellow behind on both surfaces; wings, brownish with a large patch of white; tail, black; bill, greenish-yellow, fig. 303. Interior of N. A. east of the Rockies, wandering eastward irregularly south to Kansas east to N. E. Call note, loud and frequently given; song, short and not very pleasing.

CC, F, x, 1. 1-4.

y. Song Grosbeak.
Zamelodia.

Large fringiline birds with large bills, long wings, and long, square tails; nests of sticks placed in trees or bushes, very frail structures; eggs, blue, spotted with reddish-brown.

1. ROSE-BREADED GROSBEAK, *Z. LUDOVIGIANA* 7.75; head, neck and above, black, large patch on wings and

Fig. 304.

several smaller ones, spots on outer tail feathers, rump, and beneath, white; under wing coverts and triangular patch on breast, rose, fig. 304. Female, brown above, buffy below, streaked with dusky; under wing coverts, saffron-yellow; median line of crown, and line over eye whitish, plate 21 bill in both sexes, pale-brown, whitish beneath. Breeds in eastern N. A. from the Middle States to the southern British



CC, F, y, 1. 1-4.

Possessions; along the Alleghanies to N. C.; winters in Central America and northern S. A.; south in Sep.; north in May. Frequents open woodlands, groves and orchards. Common. Song, rich, clear and varied, the notes flowing together, given sometimes as the bird flies; alarm, a metallic click. Unsuspicious. Flight, rather swift and undulating.

2. BLACK-HEADED GROSBK, *Z. MELANOCEPHALA*. Differs from 1 in having a line behind eye, collar on neck behind, sometimes mottlings on back rump, and most of lower parts buffy cinnamon; no rose; under wing coverts and belly, yellow. Female, differs from 1 chiefly in being buffy or ochraceous, streakings on sides, but usually none on breast; yellow beneath as in male. Western U. S. from Mexico to British Columbia; accidental in Mich.

z. Cardinals. *Cardinalis*.

Large, crested grosbeaks, with thick bills, short wings, and long tails; males, bright red. Nests, in trees; eggs, grayish spotted with brown.

1. CARDINAL GROSBK, *C. CARDINALIS*. 8.50; vermillion-red duller above; line surrounding bill, with throat, black; bill, orange, fig. 305. Female, differs in being grayish-yellow above and buffy yellow below, tinged on crest and breast with red; black replaced by dusky. Eastern U. S. from the Gulf States, excepting Fla., north to southeastern N. Y., including Long Island. Resident. Common, frequenting thickets and the margins of swamps and woodlands. Song, loud, clear, and very melodious, "Whe-er" repeated six times, liquid and clear; "Quit-a" quickly given five or six times; "Wheat" a little prolonged and exceedingly sweet and clear also given six

Fig. 305.



CC, F, z, 1. 1-5.

times. Sings at almost all seasons, at least from Feb. to Nov. Alarm note, a sharp chirp.

1*. FLORIDA CARDINAL, *C. C. FLORIDANUS*. Differs from 1 in being smaller, darker, and deeper red beneath. Female, deeper buff below. Fla.

aa. Blue Grosbeaks. *Guiraca*.

Medium-sized grosbeaks with rather long, pointed wings and long tails; blue with tawny wing-bands. Nests, in trees; eggs, plain pale bluish.

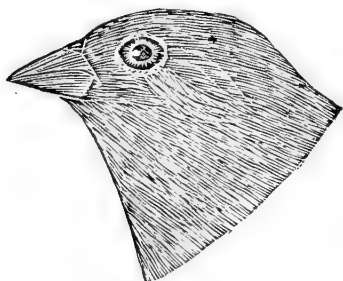
1. BLUE GROSBEAK *G. CAERULEA*. 7.00; deep blue; narrow line at base of bill, black, plate 18. Female and young, reddish-brown, paler beneath. Breeds in southern portions of eastern U. S. from N. J. and Penn. (locally) southward; winters in Yucatan and Cuba. Song, short and low, but sweet; alarm note, a rather loud chirp. Frequents open sections, on the banks of streams, among scattering trees.

bb. Painted Sparrows. *Cyanospiza*.

Small, bright-colored sparrows with long wings and rather short tails. Females, dull, quite uniform in color. Our species about 5.00.

1. INDIGO BIRD, *C. CYANEA*. Greenish-blue, darker anteriorly. Female, brownish above, paler beneath, some-

Fig. 306.



CC, F, bb, 1.

with energy, ending abruptly, heard until the middle of Aug.; alarm, a sharp chirp. Locally common.

times slightly tinged with blue, fig. 306. Eastern U. S. north to the British Provinces; winters in Central America; south in Oct.; north in May. Frequents brushy hillsides. Nest, placed in a low bush; eggs, pale blue. Song, uttered when perching on a tree top, a rather harsh, unmusical warble, divided into two parts, and given

2. **PAINTED BUNTING**, *C. CIRIS*. Head, purplish-blue; back, green; rump, upper tail coverts, and beneath, red. Female, greenish above; yellowish-green beneath. Southern U. S. north to N. C. and southern Ill.; winters from southern Fla. south to Central America; south in Sep.; north in March. Frequents thickets in the concealment of which the song, which is exceedingly sweet, is given.

3. **VARIED BUNTING**, *C. VERSICOLOR*. Differs from 2 in having the parts varied with purplish, bluish, and reddish; hind part of head and upper neck, vermilion; beneath, dull purple, reddish patch on throat. Female, grayish-brown, paler beneath; whitish on throat and abdomen. Mexico, north to Texas and southern Arizona; accidental in Mich.

cc. **Grassquits. Euetheia.**

Small, dull, tree-inhabiting sparrows with rounded wings and short tails. Nests, in trees, spherical; eggs, pale blue spotted with brown.

1. **BAHAMA GRASSQUIT**, *E. BICOLOR*. 4.00; dull black on head, neck, and anterior portion of body; grayish-green elsewhere, fig. 307. Female sometimes like male but usually duller with little or no black. Bahamas: accidental in southern Fla. Frequents settlements, nesting in trees about houses. Unsuspicious. Song, begins with two or three liquid notes given with a clear, bell-like tone, followed by a lisping series of notes. Somewhat gregarious. Abundant.

Fig. 307.



2. **MELODIOUS GRASSQUIT**, *E. CANORA*. Differs from 1 in being more greenish above and darker below; line back of eye and tuft of elongated feathers on side of neck, yellow. Female, with black of head replaced by chestnut; yellow, duller. Cuba; accidental on Sombrero Key, Fla.

CC, F, cc, 1. 1-2.

G. HONEY CREEPERS. Coerebidae.

Small birds with nine primaries, moderately long wings

Fig. 308.



and tails, curved, sharply pointed bills, fig. 308; deeply cleft tongue, and small stomach. Frequent woodlands. Food, chiefly, or wholly, fruit and the sweet juices of flowers. Tropics of America.

a. Bananaquits.

CC, G, a, 1. 1-2.

Coereba.

Tarsi, long; colors, black above or throughout, often with yellow and white markings.

1. BAHAMA BANANAQUIT, *C. BAHAMENSIS*. 4.50; dull black above; line over eye, spot on wing, and beneath, white; rump and patch on breast, yellow. Bahamas, common; casual or rare in southern Fla. Flight, strong and direct. Song, a series of low, crackling notes. Nests, in trees, domed, but irregular in form.

H. AMERICAN WARBLERS. Mniotiltidae.

Differ from **G** in having bills less strongly curved, slender or flat; stomachs, large. Confined to the continent of America and adjacent islands. Food, chiefly insects. Eggs, white to greenish, or bluish, spotted with brown of varying shades.

(Note. The view which I have taken regarding the generic divisions of this family is the result of my anatomical and other investigations of the group. The generic characters, here given in brief, will be further elaborated in a work which I now have in hand upon the subject.)

a. Creeping Warblers. *Mniotilta*.

Slender warblers with long, somewhat curved bills, long wings, large feet with the hind toe long; black and white; ancestral home, north-western S. A.

1. BLACK AND WHITE WARBLER, *M. VARIA*. 5.25; black and white in stripes; crown divided by a white line, fig. 309. Female, duller. Breeds in Fig. 309.

eastern N. A. from Va. north to Hudson Bay; winters from the Gulf States, Bahamas, and West Indies to northern S. A.; north in late April; south in Sep. Common; frequents open woodlands, creeping with a sidling, jerky motion about trees. Song, a sharp "*We-see*" given five or six times; a longer, louder lay, much like the ordinary song of the Nashville Warbler. Nests on ground near base of a tree, clump of bushes, or rock, usually partly domed with fallen leaves.



CC, H, a, 1. 1-3.

b. Long-billed Warblers. *Neodendroica*.

General form, similar to a, bill stouter, wings shorter, and feet smaller; two wing bands and tail spots on three or four outer tail feathers. Ancestral home, Central America.

1. YELLOW-THROATED WARBLER, *N. DOMINICA*. 5.25; throat, yellow; otherwise white below; pale slaty-blue above; front of crown and markings on sides of head and sides as in fig. 310; line from bill over eye, yellow in front, white behind. Breeds in the Atlantic coast district from Fla. north to Va., casually to N. Y., Conn., and Mass.; winters in Fla., Bahamas, and most of the West Indies; north in March; south in Aug. and Sep. Occurs in open woodlands, usually in tree tops. Song, a short, low warble.

1*. SYCAMORE WARBLER, *N. D. ALBILORA*. Smaller than 1 with a smaller bill, line at base of bill with little or no yellow. Mississippi Valley, north to southern Mich., east to Ohio and casually to S. C. during migration.

c. Blue Warblers. *Caeruleocantor*.

Bill, wings, and tail coverts, rather short; feet, small; tail spots, present; white spot at base of primaries; no wing bands nor yellow markings; sexes dissimilar. Origin of group, north-western S. A. Type, *Motacilla caeruleascens* Gmelin.

Fig. 310.



CC, H, b, 1. 1-3.

Fig. 311.



CC, H, c, 1. 1-3.

1. BLACK-THROATED BLUE WARBLER, *C. CAERULESCENS*. 5.25; dusky-blue above; white beneath, fig. 311. Female, olivaceous above, ochraceous-white beneath and on line over eye; white wing patch present. Common, breeding from the mountains of Penn., eastward to western Mass., east through Worcester Co., north to Hudson Bay; winters in Bahamas, West Indies, and north-eastern S. A.; north in May; south in Sep. Song, a zweeting lisp rather weak. Occurs usually in swampy, sometimes other, thickets.

1*. CAIRN'S WARBLER, *C. C. CAIRNSI*. Differs from 1 in being darker above where it is more or less clouded with black. Higher mountains of Penn. and N. C.

d. Wood Warblers. Dendroica.

Wings and tail longer than c; under tail coverts reaching middle of tail, upper shorter; wing bands (two) and tail spots present; sexes, quite similar, both with conspicuous yellow patches. Origin of group, Mexico.

1. **YELLOW-RUMPED WARBLER, D. CORONATA.** 5.50; slaty-blue above; white beneath, streaked on back, and broadly on breast and sides

Fig. 312.

with black; yellow patches on rump, sides and crown, fig. 312. Female and winter male brownish above and duller. Breeds from the mountains of western Mass. and in about the same latitude west to the Rockies north to Labrador and western Alaska; winters from the southern coast of Me.



CC, H, d, 1. 1-4.

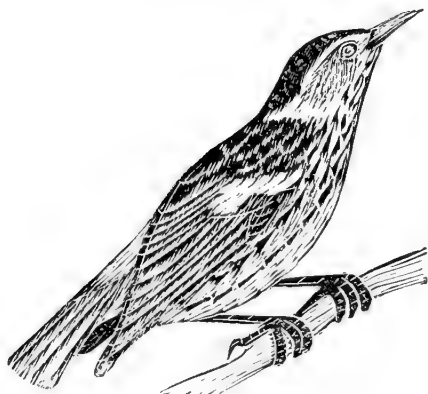
and southern Ill. south to the Bahamas, West Indies, and Central America; north in April; south in Sep. and Oct. Very abundant; found everywhere. Song, a low warble of four or five notes.

2. **AUDUBON'S WARBLER, D. AUDUBONI.** Differs from 1 in having the throat yellow and less black on side of head. Western N. A.; accidental in Mass. and Penn.

e. Honey Warblers. Perissoglossa.

Bill, very sharp, slender, and slightly curved at tip; wings, long, pointed, folding beyond middle of tail; upper tail coverts, reaching middle of tail; under tail coverts reaching beyond middle; white spots on tail; wing bands, enlarged to a patch; yellow beneath and on rump. Ancestral origin, West Indies.

1. CAPE MAY WARBLER, *P. TIGRINA*. 5.00; cheeks, chestnut; top of head, black; back, greenish, spotted with black; streaks on breast and sides, black, fig. 313.



black; streaks on breast and sides, black, fig. 313. Female, tinged with grayish above and below, duller; streakings indistinct. Breeds from northern N. E., northern Mich. north to Hudson Bay; winters in Key West, Bahamas, and the West Indies; north in May; south in Sep. Frequents woodlands and orchards. Song, a low, lively, rather pleasing warble.

CC, H, e, 1. 1-3.

f. Spotted Warblers. *Maculocantor*.

Wings and tail shorter than in d, the former rounded; upper tail coverts, short, and about equal in length; wholly yellow below, large white wing patch and band of spots crossing inner webs of tail in middle. Type, *Motacilla maculosa* Gmelin. Origin of group, Central America.

1. BLACK AND YELLOW WARBLER, *M. MACULOSA*. 5.00; band of black spots crossing breast having pendants extending along sides; top of head, slaty-blue; back, black; rump, yellow, fig. 314. Female and young, considerably duller. Breeds from the elevated regions of western Mass. west to Mich., north to Hudson Bay; winters in Mexico and Central America; north in May; south in Sep. Common, but less so most seasons in eastern Mass. Song, a short, pleasing, rather broken, warble. Frequents woodlands and thickets.

g. Azure Warblers. *Azuria*.

Small warblers with rather short bills, long wings folding beyond the middle of the short tail which has white spots on the inner webs of all the feathers; two wing bands; blue

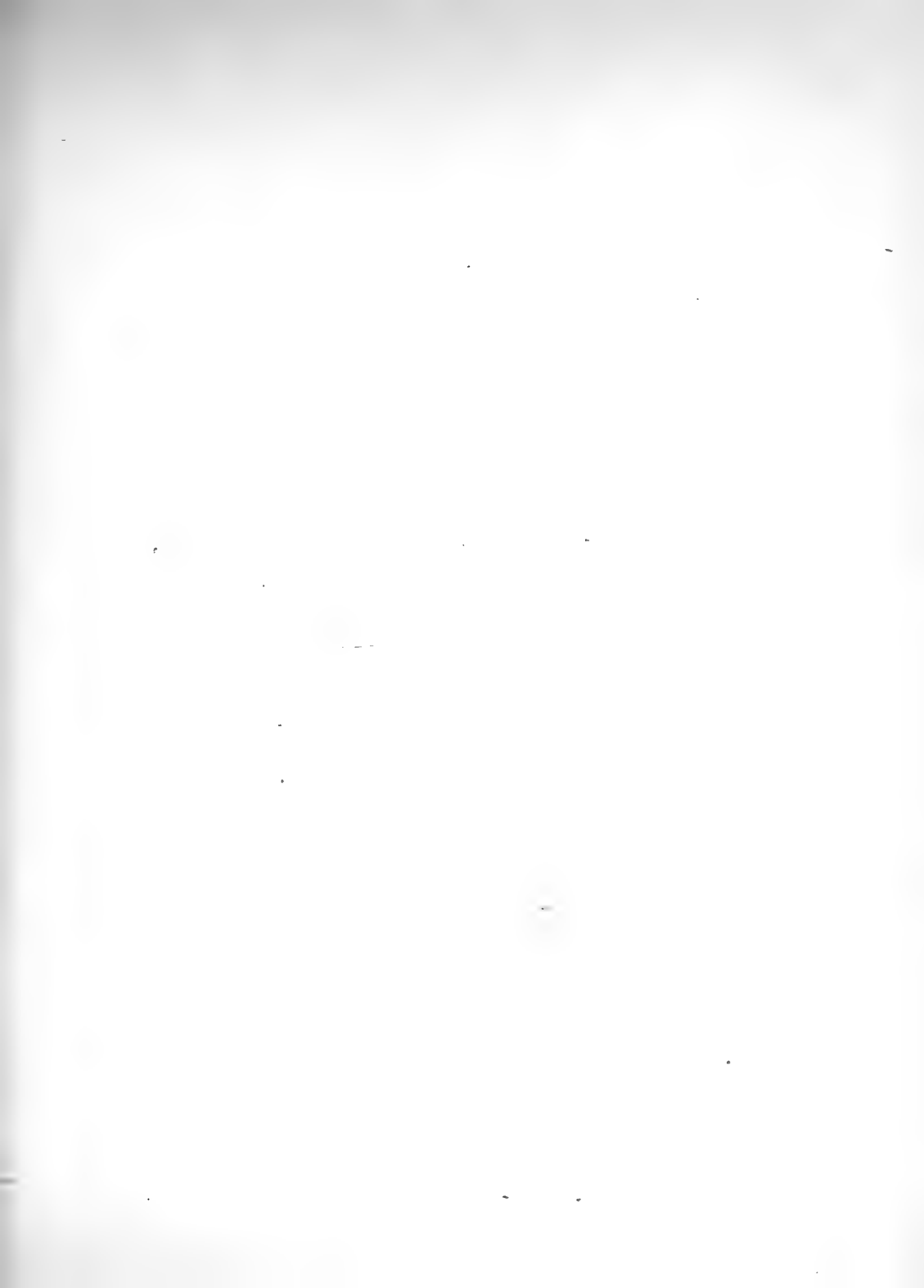
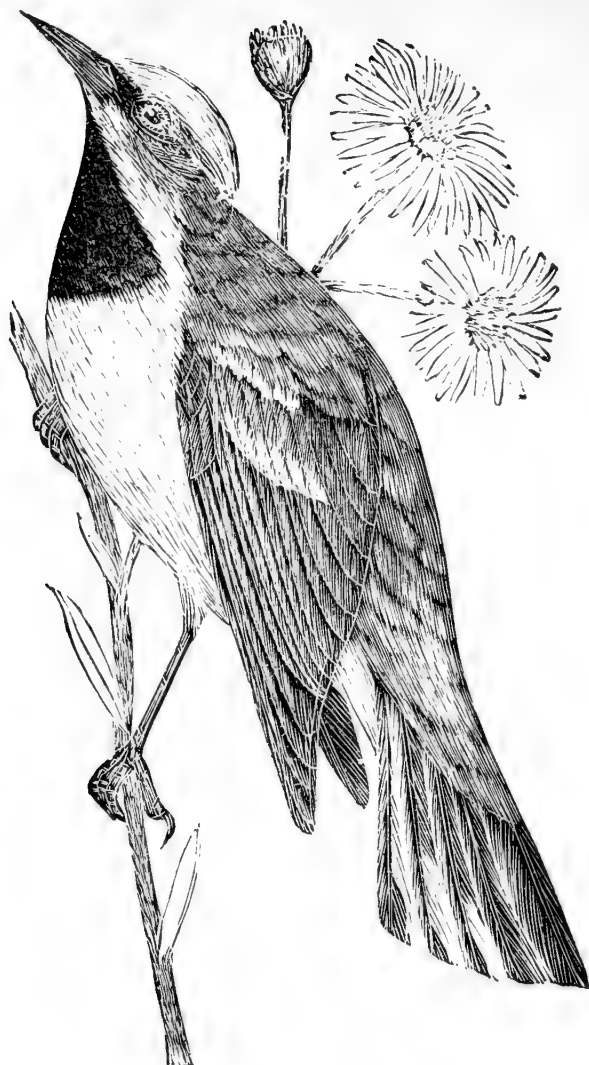


PLATE 20.



LAWRENCE'S WARBLER.

and white; no yellow. Ancestral origin, north-western S. A. Type, *Sylvia rara* Wilson (see Atlas explanation of plate XXXII).

Fig. 314.



CC, H, f, 1. 1-3.

Fig. 315.



CC, H, g, 1. 1-3.

1. CERULEAN WARBLER, *A. RARA*. 4.50; bright blue above; white beneath with a more or less distinct bluish band across breast; dusky lines on sides and on head, fig. 315. Female, greenish-blue above, greenish-yellow beneath. Breeds from the Ohio River Valley north to southern Mich.; east to western N. Y. rarely east of the Alleghanies; casually to southern N. E.; winters from Panama south to Peru. Goes south in August; north in April. Song, a guttural trill. Occurs in low woodlands.

h. Bush Warblers. *Sylviocantor*.

Wings, rather short and rounded, not reaching middle of rather short tail; upper and under tail coverts of medium length, reaching middle of tail; two broad greenish-white wing bands; tail spots on three outer feathers, white; greenish above; white below; yellow on crown. Sexes, similar. Ancestral home, Central America. Type, *Motacilla pennsylvanica* Linnaeus.

1. CHESTNUT-SIDED WARBLER, *S. PENNSYLVANICA*. 5.00; white beneath, broadly streaked with chestnut on sides; crown, yellow; greenish above, patch on side of head and

Fig. 316.



streaks on back, black, fig. 316. Female, somewhat duller; young without chestnut on sides. Breeds commonly throughout N. E., N. Y., and Penn., north to Ontario, less commonly west to Ind. and Ill; winters from Guatemala to Panama; north in May; south

in Aug. and Sep. Frequents brushy fields, especially if moist. Usual song, "*Sweet sweet sweet --- toweecher*" with a pause before the two terminal syllables which are given with a decidedly rising inflection; another, not unusual song, is a rather disconnected lay not unlike that of the Canadian Warbler; another, not as usual, is a song similar to that of the Nashville Warbler.

i. Streaked Warblers. *Lineocantor*.

Large warblers with stout bills, long wings, folding beyond middle of moderately long tail which has both its coverts long, reaching considerably beyond its tip; streaked above and sometimes below with dusky; no yellow markings. Sexes, unlike; wing bands and tail spots present in both. Ancestral origin, northern S. A.

1. BLACK-POLLED WARBLER, *L. STRIATA*. 5.50; black and white in stripes; top of head, solid black; back, grayish, fig. 317. Female, autumnal male, and young, greenish above, greenish-white beneath, streaked above and on breast and sides with dusky; wing bars often greenish. Breeds from extreme northern N. E. and northern Mich. to Hudson Bay; winters in northern S. A.; north in May; south in Sep. and Oct. Abundant, occurring in orchards and low

growths in woodlands. Song, a weak "Zip" given four or five times, occasionally heard in autumn.

2. BAY-BREASTED WARBLER, *L. CASTANEA*. 5.50; Fig. 317.

grayish above, streaked with dusky; sides of head and forehead, dusky; crown, throat, breast and sides, reddish-brown or bay, fig. 318. Female, autumnal male and young, quite similar to 1 but differ in always being buffy below and in often showing traces of bay. Breeds from northern N. E. and Mich. to Hudson Bay; winters in northern S. A.; north in May; south in Sep. Common over most of its breeding and migration range but rather uncommon in eastern N. E.; occurs in evergreen woodlands. Song, begins with a series of lisping notes and ends with a short warble.



CC, H, i, 1. 1-3.

j. Spruce Warblers. *Piceacantor*.

Fig. 318.



Small; wings of medium length, folding to middle of tail, pointed; upper tail coverts, shorter than middle of tail; under, longer; wing bands forming one patch; tail spots, large; much black above; throat and breast, orange. Type, *Motacilla blackburniae* Gmelin. Ancestral origin, north-western S. A.

CC, H, i, 2. 1-3.

1. BLACKBURNIAN WARBLER, *P. BLACKBURNIAE*.
4.80; throat, upper breast, spot on top of head and behind
Fig. 319.



ear coverts, and line over eye, bright orange; upper parts, streaked with whitish; lower parts behind, yellow, fig. 319. Female, similar but brownish above with the orange markings duller. Breeds from the southern Alleghanies and Mich. north through the mountains of western Mass. to Labrador; not very common on the eastern coast of U. S.; winters in north-western S. A.; south in Sep.; north in May. Frequents evergreen and sometimes other woodlands. Song, a series of about six double

CC, H, j, 1. 1-3. lisping notes which become somewhat squeaky as they advance, and terminate in an ascending scale.

k. Green Warblers. *Vireocantor*.

Small; bills, rather slender; wings, slightly rounded, not reaching beyond middle of tail, both coverts of which do not reach beyond its middle; two wing bars; tail spots, large; bright green above. Type, *Motacilla virens* Gmelin. Ancestral origin, Central America.

1. BLACK-THROATED GREEN WARBLER, *V. VIRENS*.
5.00; cheeks and forehead, yellow; throat, and streaks on sides, black, fig. 320. Female, throat more or less yellow, thus encroaching on the black patch. Young, with less black on breast. Breeds in eastern N. A. from Conn. and southern Ill. north to Hudson Bay and south along the Alleghanies to S. C.; winters in Central America; south in Sep.; north in May. Abundant in white pine woodlands and less so among pitch pines. Song, of five or six notes, "*Good Saint The-re-sa*" given with a rising inflection and with a decided accent on the last syllable; another song, usually given in late sum-

mer is, "*Trees, trees, mur-mur-ing trees*"; there are also other variations but all are given with a peculiar intonation that always characterizes the species.

2. TOWNSEND'S WARBLER, V. TOWNSENDI. Differs from 1 in having the top of head and cheeks black, and in being distinctly yellow below the black breast patch. Breeds in western N. A. from the mountains of southern Cal. to Alaska; winters in Central America; south in Sep.; north in May. Accidental in Penn.

Fig. 320.



1. Field Warblers. Agreocantor.

Large; wings short and rather rounded, not reaching middle of tail; two wing bands; tail spots not large; slaty above; yellow beneath with black markings. Type, *Sylvicola kirtlandii* Baird. Ancestral origin, West Indies.

CC, H, k, 1. 1-3.

1. KIRTLAND'S WARBLER, A KIRTLANDI. 5.50; Fig. 321.



slaty above with feathers of back tinged with rufous; yellow beneath; patch on side of head, spots on breast and on top of head, black, fig. 321. Female, duller. Breeds in Mich.; nest, placed on ground; winters in the Bahamas and probably some of the West Indies; north in May; south in Sep. Frequents low bushes in fields, often on the ground; moves tail up and down; gives a sharp note of alarm; song as heard by Mr. Norman A. Wood,

CC, H, 1, 1. 1-3.

who discovered the breeding grounds, "*Ch-ch-che-che-a*" or "*Cha, cha-che-chee wicha-a-a*" with the terminal "*a*" prolonged in both. Rare.

m. Pine Warblers. *Pinacantor*.

Large; bills, stout; wings, more or less rounded, reaching middle of tail or shorter; upper and lower tail coverts, barely reaching middle of tail; wing bands, two, distinct; tail spots, large; greenish-yellow, darker above, lighter below; no prominent black markings. Type, *Sylvia vigorsii* Audubon. Ancestral origin, West Indies.

1. PINE WARBLER, *P. VIGORSII*. 5.50; greenish-yellow

Fig. 322.



low above, yellowish-green beneath to the lower part of breast, obscurely streaked on breast with dusky; remaining lower parts dull white, fig. 322. Female, grayish-olive above; grayish-white beneath slightly tinged with yellow. Breeds in eastern U. S. from northern Fla. north to New Brunswick; winters from N. C. occasionally as far north as Mass., to Fla.; north in April; south in Sep. and Oct.

CC, H, m, 1. 1-3.

Abundant in pitch pine woods, less common elsewhere. Song, a musical trill of about six notes sometimes followed by a short warble, occasionally the warble is given without the trill; song also heard in Sep. Double brooded, nesting in May and July.

- 1*. FLORIDA PINE WARBLER, *P. v. FLORIDA*. Bill, larger than in 1 and also differs in being decidedly golden yellow above and below, the yellow of the lower surface extending backward along the flanks, thus leaving the abdomen and under tail coverts white. Female but little duller,

about as bright as the male of 1 and with the distribution of the yellow below restricted as in that form. Types, taken in middle Fla. (Enterprise and Deep Creek, near Lake Ashby) in March, 1901, now in my collection.

n. Ground Warblers. Terracantor.

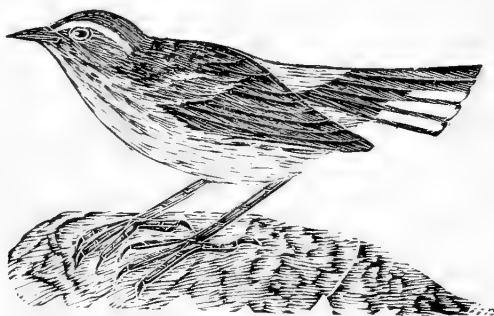
Size, medium; bill, small; wings, medium, rounded, folding to middle of tail, both coverts of which reach about to its middle; no wing bands; tail spots, short, square; top of head, chestnut; yellow beneath; ground nesting. Sexes, similar. Ancestral origin, West Indies. Type, *Motacilla palmarum* Gmelin.

1. RED-POLLED WARBLER, *T. PALMARUM*. 5.25; brownish-olive above; rump, yellow; remaining lower portions, white; crown,

Fig. 323.

streaks on breast and sides, chestnut, fig. 323.

Young, with little or no chestnut on crown and streaked with dusky beneath on a dull white ground; under tail coverts, always yellow. Breeds in the interior of British America west of



CC, H, n, 1. 1-3.

Hudson Bay; winters from N. C. southward through Fla., Bahamas, and many of the West Indies; uncommon during the fall migration north of N. C. east of the Alleghanies and in N. E. Frequents open places, feeding much on the ground, often in the vicinity of dwellings. Alarm, a sharp chirp; song, a feeble trill. In common with 2 has the habit of raising and lowering tail.

2. YELLOW REDPOLL, *T. HYPOCHRYSEA*. Larger than 1 and always wholly yellow beneath. Breeds from northern N. E. north to the eastern shores of Hudson Bay; winters from N. C. to southern Fla.; south in Sep.; north in April. Common; rare west of the Alleghanies.

o. Fruticantor. Scrub Warblers.

Bill, small; wings, short, much rounded, not reaching middle of tail, the upper coverts of which are very short; lower barely reaching its middle; one or two yellow wing bands; tail spots, large. Type, *Sylvia discolor* Vieillot.

1. PRAIRIE WARBLER, *F. DISCOLOR*. 5.00; golden-yellow above; yellow beneath and on line over eye; line through eye, spots from base of bill along sides, black; spots

Fig. 324.



on middle back, chestnut; two wing bars, fig. 324. Female, somewhat duller. Breeds from northern Fla. north to Mass., where it is common locally, also occurs less commonly west to Ill., Ind., and southern Mich.; winters in the Bahamas and West Indies; south in Aug. and Sep.; north in May. Frequents scrub lands. Song, a rather harsh trill of about six notes given in an ascending scale.

p. Golden Warblers. Chrysocantor.

Bill, rather large; wings, quite

CC, H, o, 1. 1-3. long, rounded; tail, short, its under coverts long, two thirds its length; upper coverts, but little shorter; no wing bars nor tail spots, but feathers of tail and wings margined with yellow. Type, *Molacilla aestiva* Gmelin. Ancestral origin, northern S. A.

1. YELLOW WARBLER, *C. AESTIVA*. 5.00; golden-yellow above; clear yellow beneath, streaked on breast and sides with reddish, fig. 325. Female, duller and with few streaks beneath; young with no streaks. Breeds throughout eastern N. A. from northern Ga. north to the Barren Grounds and far west; winters in northern S. A.; south in Aug. and Sep.; north in April and May. Frequents open sections in

the vicinity of thickets where it is common. Song, a lively lay of about seven notes something like "*Sweet sweet sweet to sweetee*" sometimes another "*Sweet*" being added.

q. Little Warblers. Compsothlypis.

Small warblers with short, acute bills, white wing patch and tail spots bluish above, more or less yellow beneath, with yellowish patch in middle of back. Fig. 325.

Ancestral origin, northern S. A.

1. BLUE YELLOW-BACKED WARBLER, C. AMERICANA. 4.75; bluish above and on sides of head; throat and breast, yellow with a band of dusky and chestnut on breast. Female, duller. Breeds from Va. southward to the Gulf States; winters in Fla.; south in Aug. and Sep.; north in April and May. Frequents woodlands and builds its nest in the "Spanish moss" which drapes the trees in the south.

1*. NORTHERN BLUE YELLOW-BACK, C. A. USNEAE. Differs from 1 in being a little larger, and darker with more chestnut below, especially on sides, plate CC, H, p. 1.1-3. 15. Breeds from Va. north to Canada but confined to those sections in which the long, pendulous lichens of the genus *Usnea* grow, for in these it builds its nest. Occurs everywhere during migration; very active. Song, a vehemently uttered "*Swee swee swee swee swee-zer*" the last two syllables being quickly given, the last ascending; these are sometimes omitted.

1**. WESTERN BLUE YELLOW-BACK, C. A. RAMALINAE. Colored as in 1* but smaller than 1. Breeds from Mich. and Minn. south to the Gulf. Both 1* and 1** winter in the Bahamas and West Indies.



r. Sharp-billed Warblers. *Helminthophila*.

Small warblers with rather long, very acute bills, wings folding about middle of tail or shorter; with or without tail spots.

A. Wing Bands and Tail Spots present.

1. GOLDEN-WINGED WARBLER, *H. CHRYSOPTERA*. 5.00; bluish-ash above, ashy-white on line over eye and below; broad patch on side of head, and on throat, black; patch on wing, sometimes two bands, and top of head yellow. Female duller with black markings replaced by dusky, plate 18. Breeds from Mass. west to Mich., south to Conn. and N. J. and along the Alleghanies to Ga. Frequents low growths and is of somewhat local distribution. Song, a rather drawling "Zee" repeated from four to six times and a guttural warble seldom heard; alarm, sharp.

2. BREWSTER'S WARBLER, *H. LEUCOBRONCHIALIS*. Differs from 1 in being without the black throat patch and in having a very narrow line through eye, with the lower parts often tinged with yellow. Female, with the throat white or dusky, but always with a narrow black line through eye, plate 19. Breeds in Mass. (rarely), Conn., N. Y., Penn., N. J., Md., and Va. Winter range unknown, but has been taken in La. Song, averaging shorter and more quickly given.

3. LAWRENCE'S WARBLER, *H. LAWRENCEI*. Differs from 1 in having the sides of head and lower parts yellow but the line through eye is narrow as in 2; wing bands, usually white, but sometimes tinged with yellow, plate 20; back, greenish as in 4.

4. BLUE-WINGED WARBLER, *H. PINUS*. 5.00; greenish above, yellow below and on top of head; narrow black line through eye; wings, bluish, wing bands white or sometimes tinged with yellow, plate 21. Female, duller. Breeds from Conn. west to Mich., but is local in distribution; winters in Mexico and Central America; north in May; south in Aug. and Sep.; casual in Mass. Song, a wiry, lisping trill.

B. Wing Bands and prominent Tail Spots absent.

5. **BACHMAN'S WARBLER**, *H. BACHMANI*. 4.25; olive-green above, yellow beneath and on forehead; patch on crown and on throat and breast, black; a little white on outer tail feathers. Female, much duller, plain gray below, slightly yellow on crown. Breeds in N. C., S. C., and Mo., casually in Va. and Ark.; winters in Cuba; north in March; south in Aug. Rare.

6. **ORANGE-CROWNED WARBLER**, *H. CELATA*. 5.00; grayish-olive above; grayish-yellow beneath; concealed spot of dull orange on top of head, fig. 326. Female, a little duller. Young, without much orange on crown. Occurs in woodlands. Song, a low, sweet trill. Breeds from Manitoba north to Alaska, occasionally further south; winters sparingly from S. C. to Key West, more commonly in Mexico; south in Sep. and Oct.; north in April and May. Casual in N. E.

Fig. 326.



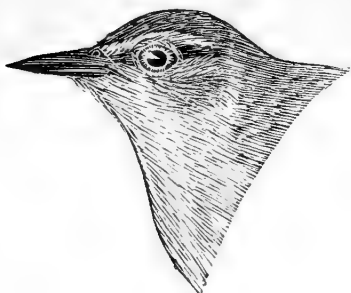
7. **NASHVILLE WARBLER**, *H. RUBRICAPILLA*. 4.80; greenish above; yellow below; head, bluish with a partly concealed patch of chestnut; a whitish eye ring. Female, duller. Young, very dull, no chestnut on crown. Breeds from Conn. and Mass. north to Canada and west to Ill.; winters in Mexico; south in Aug. and Sep.; north in May. Common. Frequents the margins of woodlands. Song, four or five harsh, quite rapidly given notes ("Swe"), followed by four in quite a different tone (a kind of a trill "De"), and ending abruptly, as if unfinished. The song is uttered as the bird perches high in a tree.

CC, H₁ r, 6.

8. **TENNESSEE WARBLER**, *H. PEREGRINA*. 5.00; back, greenish; head, bluish; beneath, dull white; slight whitish line over eye, fig. 327. Female, somewhat duller, sometimes tinged with greenish beneath. Breeds in northern N. E.

north to Labrador; rare during migration east of the Alleghanies and Hudson River Valley; winters in Central America; south in Aug. and Sep.; north in May. Song, a little like 7, but the first part is more divided and the last part shriller.

Fig. 327.



s. Orange Warblers.
Protonotaria.

Large; bill, large, long, and acute; wings, long; color, quite uniform. Nest in holes of trees. Ancestral origin, north-western S. A.

CC, H, r, 8.

1. PROTHONOTARY WARBLER, *P. CITREA*. 5.40; greater part of head and beneath, rich yellow; back, orange-green; rump and wings, bluish; all but terminal portion of inner webs of all but two central tail feathers, white, plate 22, A 1. Female, duller. Breeds in river bottoms from Fla. to Va. west to the Mississippi Valley; winters in northern S. A.; north in April; south in Aug. and Sep.; casual as far north as N. E. and New Brunswick. Song, loud and not unlike the "*Peet tweet*" of the spotted sandpiper; also gives a flight song which is a low, sweet warble.

t. Buffy Warblers. Helmitheros.

Plain-colored warblers with stout bills and striped heads. Ground nesting. Sexes, similar. Ancestral origin, northern S. A.

1. WORM-EATING WARBLER, *H. VERMIVORUS*. 5.35; greenish above; head, and beneath, buffy; stripe on side of crown and behind eye, dull black, plate 22, B. Breeds from S. C. to southern N. Y., west to Ill. and Ind.; casual further north (Mass., N. Y., Mich., etc.); winters in Fla., Bahamas, West Indies, and Mexico; north in April; south in Aug. Frequents low woodlands, nesting on the ground. Song, a feeble trill.

u. Plain Warblers. *Helinaia*.

Bill, longer than in *t*; colors, plain with no prominent spots or streaks; nests attached to grass stalks, etc.

1. SWAINSON'S WARBLER, *H. SWAINSONII*. 5.50; olive above; yellowish-white beneath; top of head brownish; line over eye, buff. Frequents swampy sections. Breeds from Va. west to Ind.; south to north-western Fla. and La.; winters in Jamaica; south in Sep.; north in April.

v. Thicket Warblers. *Frutiornis*.

Bill, rather stout; wings, folding to middle of tail which is slightly rounded; under parts, wholly yellow; head, conspicuously marked with black (see explanation of plate XXXI in Atlas).

1. KENTUCKY WARBLER, *F. FORMOSA*. 5.50; greenish above; yellow beneath; portion of top of head and patch on its side, black, fig. 328. Female, usually a little duller. Breeds in the Mississippi Valley north to the Ohio and east to western N. C.; casual further north and east; winters in Central America; south in Aug. and Sep.; north in April. Frequents heavy woodlands. Song, loud and clear, not unlike that of the Maryland Yellow-throat.

Fig. 328.



w. Long-winged Warblers. *Oporornis*.

CC, H, v, 1. 1-3.

Large, stout warblers with long wings and large feet; colors, plain.

1. CONNECTICUT WARBLER, *O. AGILIS*. 5.50; dark olive-green above; yellow below; head, throat, and breast, ashy-gray, more or less mixed with black; eye ring, white, fig. 329. Female, with ashy of head and breast replaced by

brownish-gray. Breeding range, as far as known, Minn. and
Fig. 329.



CC, H, w, 1. 1-3.

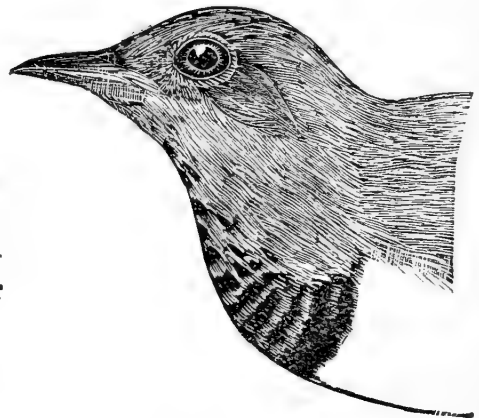
Manitoba, possibly southern Wis.; winter range, unknown; south in Sep. (Mass.) and Oct. (N. J. to the Bahamas). Frequents swampy thickets; has habit of jerking tail. Song, as heard in Mass. in May, a low, sweet warble; alarm, a very sharp note.

x. Ashy Warblers.
Cinerosa.

Differ from u in having the wings shorter and not as pointed: tail, somewhat rounded.

1. MOURNING WARBLER, C. PHILADELPHIA. 5.00; differs from w, 1 in the absence of the white eye ring and in having more black on breast, fig. 330. Breeds from northern N. E. west to Mich. north to Canada; winters in northwestern S. A.; north in May; south in Aug. and Sep. Frequents thickets on the margins of woodlands but is very rare along the Atlantic coast. Song, loud, clear and pleasing, suggesting that of the Water Thrush.

Fig. 330.



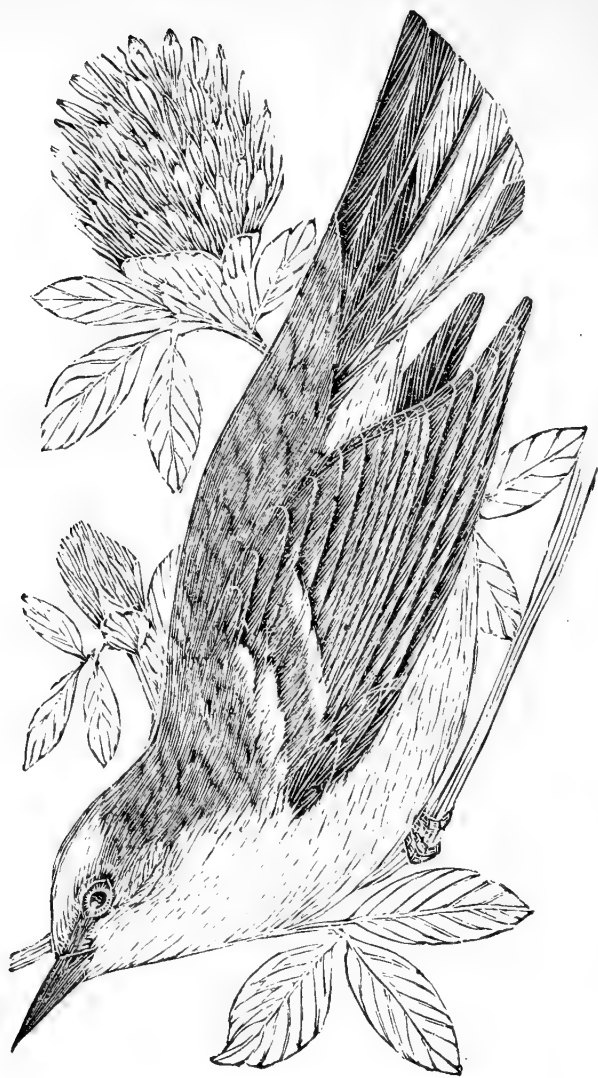
y. Yellow-throats.
Geothlypis.

Wings, short and rounded, barely reaching base of tail, which is rounded; throat, yellow with a conspicuous mask of black on face.

CC, H, x, 1.



PLATE 21.



BLUE-WINGED YELLOW WARBLER.

1. MARYLAND YELLOW-THROAT, G. TRICHAS. 5.00; grayish-green above, yellow of lower parts not extending beyond middle; mask not extending down on sides of neck into a point; margined behind with whitish. Female, without mask and not as yellow below. Breeds on the Atlantic coast of U. S. from Md. south to Ga.; casual as far north as R. I. For song and habits, see 1*.

1*. NORTHERN YELLOW-THROAT, G. T. BRACHIDACTYLA. Larger than 1, yellow extending over nearly the whole of lower surface; mask extending into a point on sides of neck; darker above, fig. 331. Breeds from

Fig. 331.

N. E. west to Mich., north to Canada, south to range of 1; winters from the Carolinas southward to the West Indies, casually as far north as Mass.; south in Sep. and Oct.; north in March and April. Common, frequents swampy thickets. Song, loud and ringing, "Witch-i-ty" repeated rather slowly five or six times; a warbling song, given while hovering, and a continuous ratch-like sound, emitted occasionally, probably by both sexes; alarm, harsh.



1**. SOUTHERN YELLOW-THROAT, CC, H, y, 1*. G. T. IGNOTA. Differs from 1* in having 1-4. the wing rounder, colors darker, deeper yellow below with sides quite brownish. Breeds from southern Va. south to Fla. and along the Gulf Coast to eastern Texas; winters from the Carolinas to Key West.

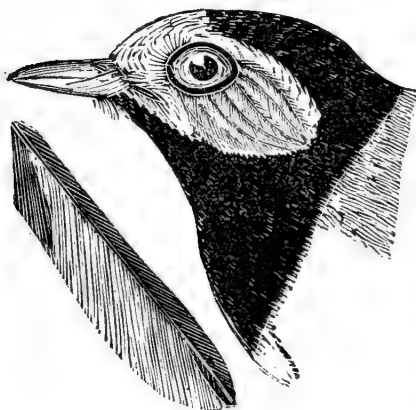
z. Flycatching Warblers. Wilsonia.

Bill, flattened, with bristles at base; wings, rather short; no wing bands.

1. HOODED WARBLER, W. MITRATA. 5.25; black hood covering head, leaving yellow mask on face; greenish above; yellow below; tail with white spots, fig. 332. Female, duller. Breeds in eastern N. A. from southern Conn. to Fla.;

winters in Central America; south in Sep.; north in April. Frequents high thickets in swampy places, notably the rhododendrons. Song, loud and clear, not unlike that of the Louisiana Water Thrush; alarm, sharp.

Fig. 332.



CC, H, z, 1.

3. CANADIAN WARBLER, *W. CANADENSIS*. 5.50; bluish above; yellow beneath; spots on crown, space behind eye and necklace of spots on breast, black, fig. 334. Female, duller. Frequents swampy thickets. Song, a disconnected warble of from three to six notes. Breeds from the elevated regions of Mass. south along the mountains to N. C., west to central Minn., north to Labrador; winters in north-western S. A.; south in Aug. and Sep.; north in April and May.

2. WILSON'S WARBLER,

W. PUSILLUS. 5.00; golden-green above; greenish-yellow beneath; crown, black, fig. 333. Female, with less black on back of head. Breeds from extreme northern N. E. north to Labrador; winters in Central America; south in Aug. and Sep.; north in April and May. Very active, frequenting low growths, especially willows. Song, a trill; sometimes a low warble.

Fig. 333.



CC, H, z, 2. 1-3.

aa. Painted Warblers. *Setophaga*.

Bill, shorter, flatter, and wider at base than in **z**, with more bristles; habits, decidedly flycatcher-like.

1. AMERICAN REDSTART, *S. RUTICILLA*. 5.40; black excepting on abdomen; six red-dish-orange patches on sides, wings and tail, plate 21. Female, and young male, with the black replaced by grayish and the spots by yellow. Breeds from N. C. and Ark. north to Hudson Bay, west to Utah; winters in the Bahamas and West Indies; casually in S. C.; south in Aug., Sep., and Oct.; north in April. Restless, constantly moving and spreading its tail. Song, a sharp, trill-like warble of from four to six notes, given rapidly and ending abruptly.

Fig. 334.



CC, H, z, 3. 1-3.

I. CHATS. Icteridae.

Larger than in **H**; bill, rather thick, arched; wings, short, rounded; tail, long; rounded.

a. Olive and Yellow Chats. Icteria.

Greenish above; yellow below. Sexes, similar. Nests, in bushes.

1. YELLOW-BREASTED CHAT, *I. VIRENS*. 7.25; spot in front of eye, white; line in this, extending from bill to eye, black, fig. 335. Breeds from southern N. E. (rarely from Mass.) west to southern Mich. and Wis. south to the Carolinas; winters in Central America; south in Aug. and Sep.; north in April and May. Frequents thickets and low growths; shy and retiring, oftener heard than seen. Habits somewhat wren-like; drops wings and raises tail. Notes, much varied, with whistles, chucklings, trills, and oriole-like scolds; flight song a series of whistling "*Tutes*" given as the bird drops downward in jerks with wings thrown upward, tail down, and legs dangling.

J. WOOD WAGTAILS. Seiuridae.

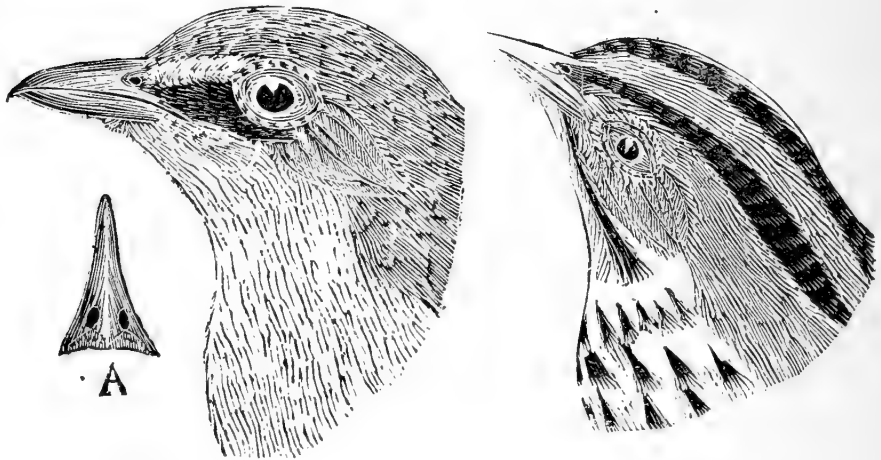
Slender birds with not large bills, long wings and square tails, that are often moved up and down. Nests, on ground.

a. Wagtail Thrushes. Seiurus.

Colors, nearly uniform above; light beneath, streaked with darker, Sexes, similar.

Fig. 335.

Fig. 335.



CC, I, a, 1.

CC, J, a, 1.

1. OVEN BIRD, *S. AUROCAPILLUS*. 6.00; pale olive-green above; crown, dull yellowish-orange, margined with black, fig. 336; white beneath, streakings black. Breeds from Va. west to Kan., north to Hudson Bay; winters from middle Fla. south through the Bahamas to the West Indies, Mexico, and Central America; south in Aug. and Sep.; north in April and May. Frequents open woodlands. Song, "Techee" five or six times repeated with increasing volume; the "vesper" hovering song, a rapidly given, sweet warble. Walks much on ground, and on the large, lower limbs of trees. Abundant.

2. WATER THRUSH, *S. NOVEBORACENSIS*. 5.90; dark olive-brown above; line over eye and beneath, decidedly greenish, fig. 337. Breeds from northern N. E. west to northern Ill., north to Hudson Bay; winters in Key West, Baha-

mas, West Indies, Central America, and northern S. A.; south in Aug. and Sep.; north in April and May. Frequents swampy locations in the vicinity of water, into which it wades like a sandpiper. Song, several loud, clear notes, followed by a lower, sweet warble; alarm, a very sharp chirp. Common.

Fig. 337.



2*. GRENNELL WATER THRUSH, *S. N. NOTABILIS*.

Differs from 2 in being larger, more grayish above and less yellow below, sometimes nearly, or quite, white. Breeds in western N. A. from Minn. north to Alaska; rare in migration in the Atlantic Coast States from N. J. southward; winters in the West Indies and Central America; migration as in 2.

CC, J, a, 2. 1-5.

3. LOUISIANA WATER THRUSH, *S. MOTACILLA*. Dif-

fers from 2 in being a little



larger; bill, larger; decidedly white over eye, fig. 338; white or buffy beneath; always buffy on flanks and undertail coverts. Song, a more uniform melody than 2, terminating more softly. Breeds from southern N. E. west to southern Minn., south to the Gulf States; winters in Central America, Bahamas, and West Indies; south in Sep.; north in March and April.

CC, J, a, 3.

K. WAGTAILS AND PIPITS. Motacillidae.

Rather small, ground-inhabiting birds with long wings, having elongated tertials, long tails, and slender bills; move tails up and down. Nest on ground; eggs, spotted.

a. Wagtails. *Motacilla*.

Tail, quite long; colors, black, white, and gray, sometimes yellow beneath.

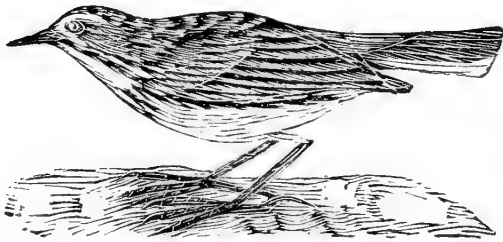
1. WHITE WAGTAIL, *M. ALBA*. 7.00; forehead, sides of neck, beneath, and outer tail feathers, white; crown, hind neck, and throat, black; back, ashy. Breeds in Europe; accidental in Greenland.

b. Pipits. *Anthus*.

Tail, not as long; brown above; whitish below, streaked with brown.

1. AMERICAN PIPIT, *A. PENNSYLVANICUS*. 6.50; grayish-olive above, indistinctly streaked with darker; beneath, cinnamon-buff; streaks on breast and sides, broad and numerous, fig. 339; outer tail feathers, nearly white. Breeds

Fig. 339.



from Newfoundland and mountains of Colorado northward; winters from the Carolinas southward to Mexico. Common during migration, especially near the coast; south in Sep. and Oct.; north in May. Frequents

open fields and marshes, and beaches. Gregarious. Call, a low, double note. Flight, undulating and erratic.

2. MEADOW PIPIT, *A. PRATENSIS*. Differs from 1 in being greenish above and below and in being more heavily streaked above. Europe; accidental in Greenland.

3. SPRAGUE'S PIPIT, *A. SPRAGUEI*. Smaller than 1; bill, shorter; paler beneath with narrow streakings, very few on sides; light edgings to feathers above paler. Breeds on the interior plains of N. A. from eastern Montana north into Manitoba; winters in Tex., Mexico, and southern Ia.; rare in S. C. Flight song, a clear, harmonious melody, given as the bird hovers high in air.

L. SWALLOWS. *Hirundinidae*.

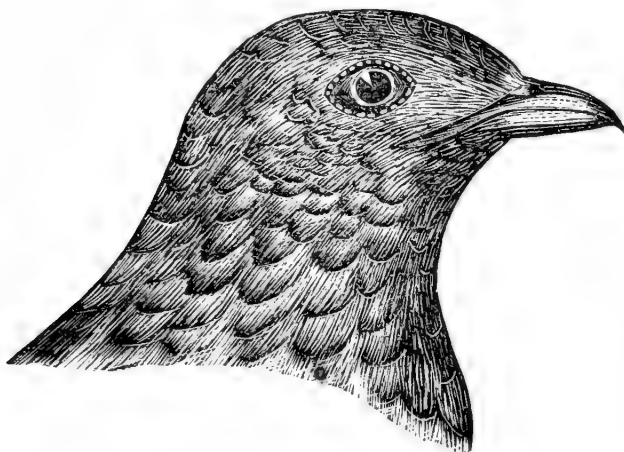
Singing perchers modified for taking their food on the wing; bill, small, but with a very wide gape; wings, long and pointed; feet, small. Eggs, white, with or without spots.

a. Martins. *Progne*.

Large, nearly uniformly colored swallows; bill and feet, fig. 340, large; tail, somewhat forked.

Fig. 340.

Fig. 341.



CC, L, a, 1.

1. PURPLE MARTIN, *A. SUBIS*. 8.25; uniform steel-blue with violet iridescence, fig. 341. Female, duller above; grayish-white beneath. Breeds throughout temperate N. A.; winters in Mexico and northern S. A.; south in Sep.; north in April. Nests in holes of trees and bird boxes; eggs, unspotted. Flight, strong but rather heavy. Notes, loud, clear, and melodious.

1*. FLORIDA MARTIN, *P. S. FLORIDANA*. Differs from 1 in being smaller; male, darker; female, much more grayish beneath, with the white more dull. Breeds in middle and southern Fla.; north in March.

2. CUBAN MARTIN, *P. CRYPTOLEUCA*. Differs from 1 in the more deeply forked tail; male with a broad, but con-

cealed, band of white crossing lower abdomen; female, similar to 1* but with abdomen pure white. Cuba, resident; accidental in southern Fla.

b. Cliff Swallows. Petrochelidon.

Smaller; colors not uniform; tail, not forked, fig. 342. Sexes, similar.

Fig. 342.

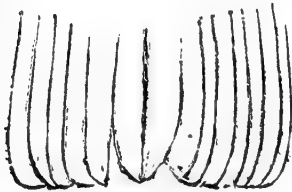


Fig. 343.



CC, L, b, 1.

1. CLIFF SWALLOW, *P. LUNIFRONS*. 5.75; above and spot on throat, dark steel-blue; crescent on forehead, and rump, reddish-buff; throat, chestnut; whitish beneath, fig. 343. Breeds throughout the greater part of N. A. Winters in S. A.; south in Sep.; north in April. Nests in communities under eaves of buildings and on rocky cliffs; eggs, spotted. Notes, a musical chatter. Flight, rather heavy.

2. CUBAN CLIFF SWALLOW, *P. FULVA*. Differs from 1 in having the throat pale reddish-cinnamon, and the rump deep chestnut. Cuba, resident; accidental on the Fla. Keys.

c. Sand Swallows. Riparia.

Small swallows, brown above, white beneath; tail, moderately forked; sexes, similar. Tuft of feathers at base of hind toe, fig. 344.

1. BANK SWALLOW, *R. RIPARIA*. 5.25; mouse-brown above; white beneath with band of brown crossing breast, fig. 345. Breeds throughout the northern hemisphere; in N.

A. from Ga. and northern Mexico, north to the Arctic regions; winters in S. A.; south in Sep.; north in April and May. Common. Nests in communities, in holes of sand banks; eggs, unspotted. Notes, a feeble twitter. Flight, rather weak.

Fig. 344.

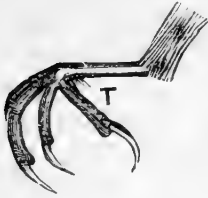


Fig. 345.



CC, L, c, 1.

d. Rough-winged Swallows. Stelgidopteryx.

Rather small swallows, brownish above, white below; tail, moderately forked; adult males with the barbs of the outer wing feather hooked backward, fig. 346.

1. ROUGH-WINGED SWALLOW, *S. SERripENNIS*. 5.50; brown throughout, excepting middle lower parts, abdomen, and under tail coverts, fig. 347. Breeds in temperate N. A. from Central America north to southern Conn. and British Columbia; winters in Central America; south in Sep.; north in May. Nests in holes of bridges, buildings, banks, etc., seldom in communities; eggs, unspotted. Notes, feeble twitters. Flight, not very strong.

Fig. 346.

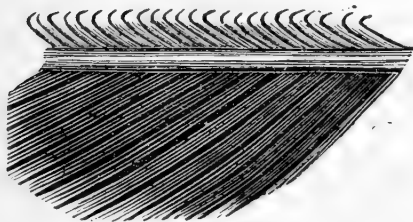
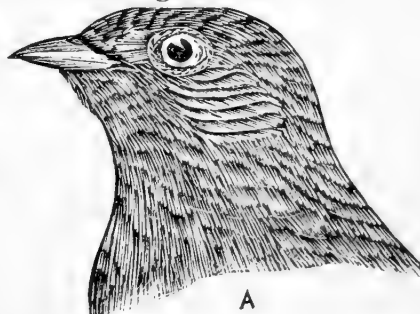


Fig. 347.



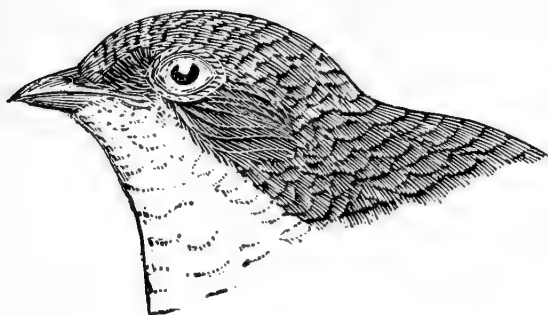
CC, L, d, 1.

e. Tree Swallows. Iridoprocne.

Larger swallows, with medium forked tails; bluish above; white beneath.

1. WHITE-BELLIED SWALLOW, *I. BICOLOR*. 6.00; greenish steel-blue above; white beneath, fig. 348. Female,

Fig. 348.



usually duller.

Young, grayish-brown above and in a band across breast.

Breeds from Va. and Cal. northward into British America; winters from S. C. through the Gulf States and occasional-

CC, L, e, 1.

ly further north;

south in Sep. and Oct.; north in April. Nests in holes of trees, sometimes excavated by the birds, in bird boxes, or about buildings. Flight, easy and rather graceful. Song, a pleasant twitter. Abundant; gregarious in autumn, congregating by thousands on the sea shore.

f. Green and White Swallows. Challichelidon.

Differ from e in having larger bills and longer, more deeply forked tails.

1. BAHAMA SWALLOW, *C. CYANEOVIRIDIS*. 6.00; velvety-green above with golden iridescence; wing coverts, rump, and tail, steel-blue; white beneath. Female, duller. Resident on New Providence, Bahamas, and occurs on some other of the Islands; accidental in Fla. Song, a musical twitter. Nests in holes of buildings.

g. Long-tailed Swallows. Hirundo.

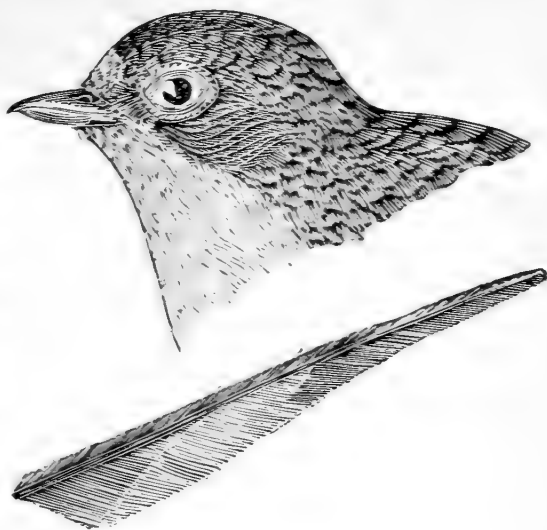
Bill, rather small; tail, long, and forked for more than one third its length.

1. AMERICAN BARN SWALLOW, *H. ERYTHROGASTRA*.

7.00: dark steel-blue above; forehead, throat, and breast, chestnut: remaining

lower parts, rich brown; tail, crossed by a band of white spots, fig. 349. Female, duller. Breeds throughout N.A. from the Arctic regions to the Gulf and into Mexico, excepting Fla.; winters in S. A.; south in Sep. and Oct.; north in April. Nests inside of buildings, and very rarely beneath their eaves. Somewhat gregarious. Song, a

Fig. 349.



pleasing, bubbling melody. Flight, very graceful and easy.

CC, L, g, 1.

M. WAXWINGS. Ampelidae.

Wings, long, pointed, folding beyond middle of short, square tail, which is sharply tipped with yellow or red; head, crested: tips of shafts of secondaries (in our species), and sometimes of tail feathers, tipped with a horny, sealingwax-like expansion. Plumage, very smooth and blended. Nests, in trees; eggs, spotted.

a. Waxwings. Ampelis.

Characters as above.

1. CEDAR WAXWING, *A. CEDORUM*. 7.25: wood-brown above grading into slate on upper tail coverts; beneath, black on chin grading into brown on breast, yellow on abdomen, and white on under tail coverts: black line on forehead through eye: not over 20 per cent have the red tips to second-

aries and not over 1 per cent on tail, fig. 350. Breeds in temperate N. A. from Va. north to Hudson Bay; in fall and winter wandering south to Fla., Bahamas, and some of the West Indies. Gregarious. Flight, strong, steady and direct, with a peculiar flutter of the wings. Note, a rather low, hissing chirp.

Fig. 350.



CC, M, a, 1. 1-4.

Fig. 351.



CC, M, a, 2. 1-4.

2. BOHEMIAN WAXWING, *A. GARRULUS*. 7.75; differs from 1 in being grayer, with no yellow on abdomen; yellow or white lines on tips of wing feathers, white tips to spurious wing, and chestnut under tail coverts, fig. 351. Breeds in the coniferous forests of Northern Hemisphere; wandering south in winter, irregularly, to northern U. S. Notes, similar to those of 1, but louder.

N. TANAGERS. TANAGRIDAE.

A large group of thick-billed, rather small singing perchers that are very closely allied to the Sparrows and Finches, in fact, intergrading completely with them, but our species do not have the cutting edge of upper mandible angled, page 8, C; chiefly tropical and sub-tropical in distribution.

a. Tooth-billed Tanagers. *Pyranga*.

Bill, slightly toothed. Nests, placed in trees; eggs, spotted.

1. SCARLET TANAGER, *P. ERYTHROMELAS*. 7.50; scarlet; wings and tail, black, fig. 352. Female and winter male, scarlet replaced by greenish. Fig. 352.

Breeds in eastern U. S. from Va. north into the southern British Provinces; winters in northern S. A.; south in Sep. and Oct.; north in May. Frequents open woodlands. Flight, swift and direct. Song, loud and distinct "*Chip cherry, cherry chip*" varied somewhat, sometimes sweet and pleasing but usually marred by a harsh tone which occurs in some of the notes.



2. LOUISIANA TANAGER, *CC, N, a, 1.* 1-4. *P. LUDOVICIANA*. Differs from 1 in having the neck black, two bands on wing, hind neck, rump, upper tail coverts, and beneath, yellow. Female, differs chiefly in having yellow wing bands. Breeds in western U. S.; accidental in N. E., N. Y., and La.; winters in Mexico.

3. SUMMER TANAGER, *P. RUBRA*. 7.25; dull red throughout; brownish on wings and tail. Female, yellowish-green, brightest beneath. Breeds in eastern U. S. from southern N. J. south to the Gulf States; casual north as far as Nova Scotia; winters in northern S. A.; south in Sep.; north in April. Frequents the pine barrens and other open woodlands. Song, loud and clear.

O. SHRIKES. *Laniidae*.

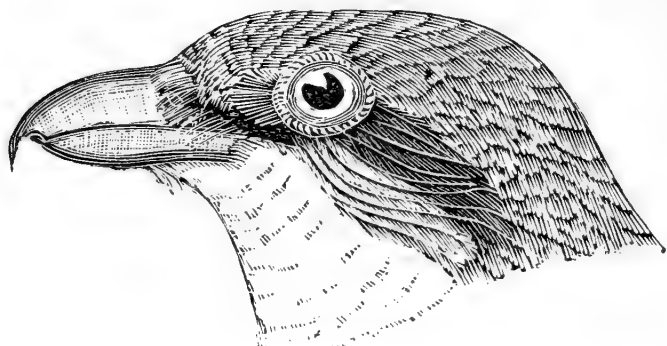
Singing perchers with hawk-like feeding habits; bill, short, strongly curved, hooked and toothed; wings, short; tail, long.

a. Gray Shrikes. *Lanius*.

Gray; wings and tail, black. Nests, in trees and bushes; eggs, spotted. Food, insects, small mammals, and birds.

1. NORTHERN SHRIKE, *L. BOREALIS*. 10.00; pale bluish-gray above; white beneath, with narrow, wavy lines (vermiculations) of dusky; patch on side of head, black; scapularies, patch on wing, tip of secondaries, and all but cen-

Fig. 353.



CC, O, a, 1.

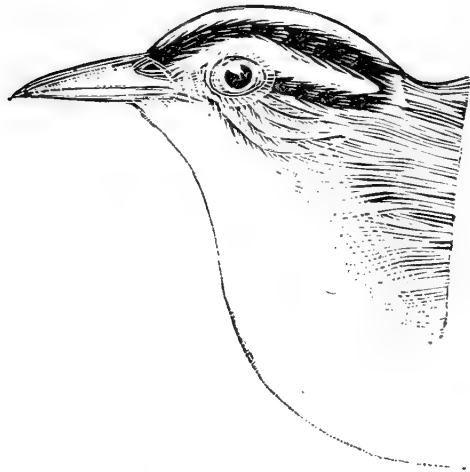
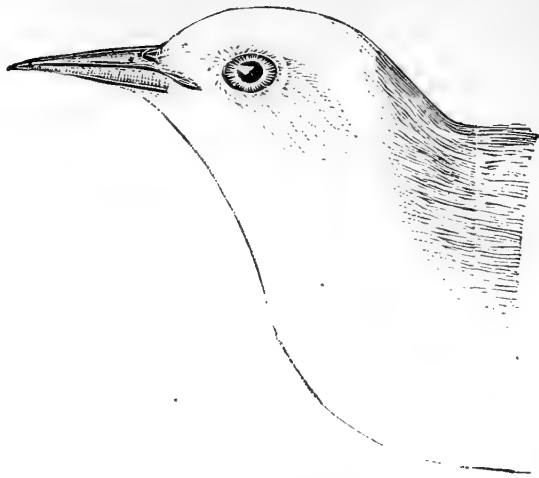
tral tail feathers, white, fig. 353. Young, much obscured above with rusty. Breeds in northern N. A. from Labrador to Alaska; wandering south in winter, somewhat irregularly, as far south as Va. and central Cal. Song, a loud, clear and varied melody; also a harsh cry. Frequents open fields. Flight, swift, direct, but with long, sweeping undulations; always rises to alight. Sits very upright.

2. LOGGERHEAD SHRIKE, *L. LUDOVICANUS*. 9.25; differs from 1 in being darker above; black head spots extending over forehead, and in having no dusky markings below, excepting in very young specimens, fig. 354. Resident in the coast district of S. C., Ga., and west to La., also all of Fla. Song and habits similar to those of 1.

2. NORTHERN LOGGERHEAD SHRIKE, *L. L. MIGRANS*. Differs from 1 in having a smaller bill and shorter tail; paler above and slightly grayish beneath. Breeds over a greater portion of eastern U. S. from N. C. and eastern Kan. north to the more southern of the British Provinces: south in winter to La. and Tex. Of local distribution.



PLATE 22.



UPPER FIGURE, PROTHONOTARY WARBLER;
LOWER FIGURE, WORM-EATING WARBLER.

P. VIREOS. Vireonidae.

Small, arboreal birds with large heads, and bills which are strongly curved at tip; rather deliberate in movement; food, insects, chiefly caterpillars; colors, mostly plain; nests suspended from a forked twig of a tree or bush; eggs, white, usually sparingly spotted.

Fig. 354.



a. Wood Vireos. Vireosylva.

Bill, rather prominent; wing bands, absent; white or pale yellow beneath.

1. RED-EYED VIREO *V. OLIVACEA*. 6.25; top of head, gray; above, grayish-green; white beneath; dark line through eye, whitish line over it, bordered above by a black line; iris, red, fig. 355. Breeds throughout temperate N. A. from Fla. into the British Provinces; winters in northern S. A.; south in Sep. and Oct.; north in April and May. Frequents woodlands. Song, monotonous repetitions

Fig. 355.



CC, O, a, 2. 1-6.

of syllables; "*Hear me, see me, hear it, heed it; sweet William, sweet it, tweet, tweet, tweet, tweet*" (quickly given but not always following the other portion) at the rate of 36 or more in a minute; also the common vireo scold. Very common.

CC, P, a, 1.

2. BLACK-WHISKERED VIREO, *V. BARBATULA*. Larger than 1; bill, longer; grayer above; dark lines on head not as clear; a slight maxillary line of dusky. Breeds in the Bahamas and southern Fla; winters in the West Indies; north in April. Song, "*Whip tom kelley* (a decided accent on the kelley) *phue*."

3. **PHILADELPHIA VIREO**, *V. PHILADELPHIA*. 5.00; grayer than 1 on back; lines on head distinct; strongly tinged with yellow beneath. Breeds from northern N. E. northward into the British Provinces; winters in Central America; south in Sep. and Oct.; north in May. Very rare east of the Connecticut River and Alleghanies. Song, similar to 1.

4. **WARBLING VIREO**, *V. GILVA*. 5.40; the grayest of our vireos, there being but little difference between the

Fig. 356.



color of head and back; no black on sides of head, but there is a slight whitish line over eye; white beneath slightly tinged with yellow, fig. 356; iris, brown. Breeds in eastern N. A. from Fla. north into the British Provinces; winters in Mexico;

CC, P, a, 4.

south in Sep.; north in April. Frequents open groves or ornamental trees in streets. Song, a continuous warble consisting of about six notes uttered at rather wide intervals.

b. Banded Vireos.

Lanivireo.

Bill, somewhat stouter than in a, wing bands, present, white; more or less yellow beneath.

1. **YELLOW-THROATED VIREO**, *L. FLAVIFRONS*. 6.00; greenish above and on sides of head; line over eye, throat, and breast,

Fig. 357.



CC, P, b, 1.

lemon-yellow; remaining under parts, white, fig. 357. Breeds in eastern N. A. from northern Fla. north to the British

Provinces; winters in Colombia, S. A.; south in Sep. and Oct.; north in May. Frequents the margins of woodlands, orchards, and open groves. Song, "*Do you hear me; do you see me; here I am*" given with emphatic energy, slightly harsh repeated about 8 or 10 times a minute. Nest, covered with lichens.

2. SOLITARY VIREO, *L. SOLITARIUS*. 5.50; top of head, deep slate-gray; back, dark olive-green; ring round eye and line to bill, white; beneath, white; sides tinged with yellow and greenish; wing bands

Fig. 358.

and under tail coverts, tinged with yellow, fig. 358. Breeds locally in southern N. E. north commonly from northern N. E. into the British Provinces; winters in the Gulf States south into Central America. Song, shorter and lower than in 1, and given with less energy, without the harsh intonation. Frequents woodlands.



CC, P, b, 2.

3. MOUNTAIN VIREO, *L. ALTICOLA*. Differs from 2 in being larger, darker, with more gray on back. Breeds in the southern Alleghanies from Md. to N. C.; winters in the lowlands of the eastern Gulf and south Atlantic States.

4. PLUMBEOUS VIREO, *L. PLUMBEUS*. Differs from 3 in having back wholly gray, and less yellow beneath. Rocky Mountains of U. S. and mountains of Mexico; accidental in N. Y.

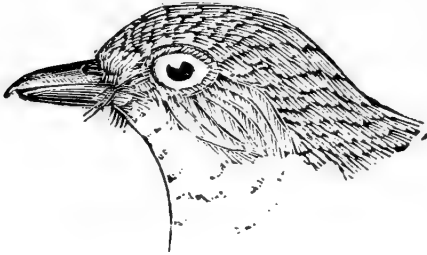
c. Little Vireos. Vireo.

Small vireos, often greenish above with much yellow about head; wing bands, present.

1. WHITE-EYED VIREO, *V. NOVEBORACENSIS*. 5.25; greenish-olive above; white beneath much tinged with yellow on sides; line from bill over eye, eye ring, and wing bands, sulphur yellow; iris, white, fig. 359. Breeds in east-

ern U. S. from northern Fla. and Tex. north to Mass. and southern Wis.; winters from S. C. to Central America; south

Fig. 359.



in Sep.; north in May. Fre-
quents swamps, rather local.
Song, varied detached notes,
given emphatically, "*I--will
give--you--a--lick*" is an ex-
ample; sometimes these
detached notes run together
as a low, continuous song.

1*. KEY WEST VIREO,

CC, P, c. 1.

V. N. MAYNARDI. Differs

from 1 in being larger, and much grayer above and on sides
of head, fig. 360. Breeds from middle Fla. south to Key West.

2. BELL'S VIREO, V. BELLII. 4.75; head, grayish-
brown; back, dull olive-
green; line over eye, ring
around it, wing bands, and
beneath, dull white; breast,
sides, flanks, and under
tail coverts, tinged with
yellowish. Breeds in the
prairie districts of the Miss-
issippi Valley from south-
ern Minn. to northern Ill.
south to eastern Texas; win-
ters in Mexico; accidental in Mass.

Fig. 360.



CC, P, c, 1*.

Q. MOCKING BIRDS AND THRASHERS.

Mimidae.

Large birds with short wings, and long tails which are
not banded; bills, slender. Sexes, similar.

a. Mockingbirds. *Mimus*.

Upper mandible of rather short bill, curved; tail, much
rounded; colors, dark above, white beneath; prominent wing
patch and tail spots. Nests, in trees and bushes; eggs, spot-
ted.

1. **MOCKINGBIRD, M. POLYGLOTTUS.** 10.00; dark, ashy-gray above; dull-white beneath; patch at base of primaries, and large portion of outer primaries, white; iris, yellowish-white, fig. 361. Resident from Mexico north to Md. and Colo., casually to Mass. Frequent thickets. Song, loud, clear, and varied, often mimicking the songs of other birds.



CC, Q, a, 1.
1-5.

lowish-white, fig. 361. Fig. 363.



CC, Q, c, 1.
1-6.

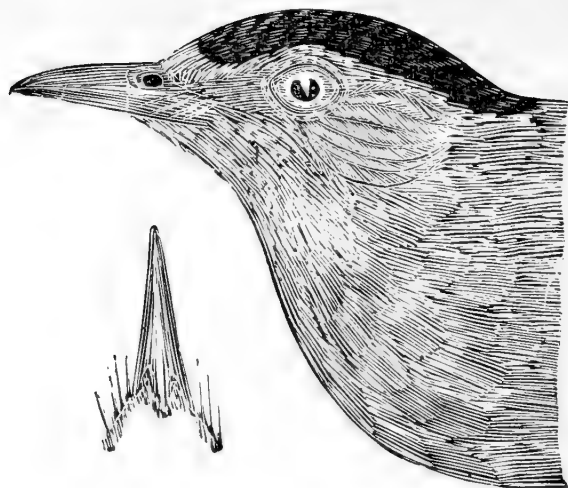
1. **CATBIRD, O. CAROLINENSIS.** 9.00; dark plumbeous; lighter beneath; top of head and tail, black; under tail coverts, chestnut. Breeds in eastern U. S. from the Gulf States north into the British Provinces west to the Rockies; winters in the Southern States, casually north to Mass.; south in Sep. and Oct.; north in April and May. Frequent thickets, often near dwellings. Song, rich and varied, sometimes mimicking other birds; notes rather deliberately given.

1*. **KEY WEST CATBIRD, G. C. GRISIFRONS.** Smaller than 1; bill, more slender; darker, but with forehead grayish, fig. 362, page 272. Key West.

c. Thrashers. *Toxostoma*.

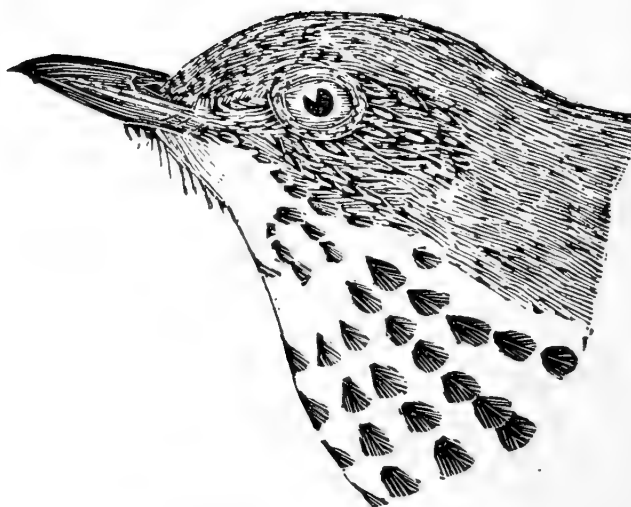
Larger than b; bill, longer; somewhat curved tail much rounded. Nests, on or near the ground; eggs, spotted.

Fig. 362.



CC, Q, b, 1*.

Fig. 377.



CC, W, a, 1.

1. BROWN THRASHER, *T. RUFUM*. 11.50; bright red-brown above; wing bands and beneath, buffy-white; streaked on sides of neck, breast, and sides, with brown, fig. 363. Breeds throughout eastern U. S. from the Carolinas southward; south in Oct.; north in April and May. Frequents dry thickets; song, loud and varied, each note being repeated once or twice. When singing is usually perched in some elevated situation.

R. WRENS. *Troglodytidae*.

Small birds with slender bills; brown above, white below; usually banded on wings or tail; often keep tail erect.

a. Mocking Wrens. *Thryothorus*.

Rather large wrens with quite long curved bills and graduated tails. Nests, in cavities of logs, stumps, etc.

1. CAROLINA WREN, *T. LUDOVICIANUS*. 5.25; rusty-brown above; line from bill over eye down neck, - buffy-white; narrow line over this, black; buffy beneath, nearly white on throat; no bands on flanks, fig. 364. Breeds from northern Fla. north to southern N. E. rarely to Mass., west to middle Kan.; winters from the Carolinas southward. Frequents low thickets. Song, loud, clear and varied; often mimics other birds.

Fig. 364.



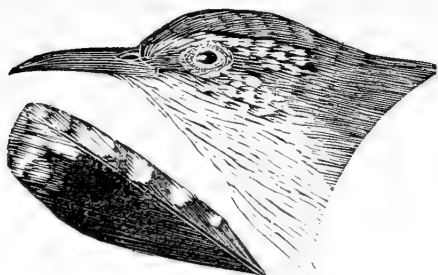
CC, R, a, 1.

1*. FLORIDA WREN, *T. L. MIAMENSIS*. Differs from 1 in being larger and much darker; rich chestnut above, tawny-ochraceous below, excepting throat. Peninsula of Fla.

b. Long-tailed Wrens. *Thryomanes*.

Bill, slender; wings and tail, rather long; in our species, white bandings and tippings on tail.

1. BEWICK'S WREN, *T. BEWICKII*. 5.50; plain brown above; line over eye and beneath, dull white; wings, tail, and
Fig. 365.



under tail coverts, barred with dusky; whitish bandings on tail, conspicuous, fig. 365. Breeds in eastern U. S. from N. J. west to southern Minn., south to northern Fla. and Tex; winters in southern portion of range; south in Sep.; north in May; accidental in N. H. Frequents open sections.

CC, R, b, 1.

Nests in holes about buildings. Song, a continuous bubbling melody.

c. House Wrens. *Troglodytes*.

Small wrens; bill, rather stout; wings and tails, short; both banded with dusky.

1. HOUSE WREN, *T. AEDON*. 5.00; dark reddish-brown above and on sides; dull white beneath tinged with
Fig. 366.

brownish; flanks barred with dusky, fig. 366. Breeds throughout eastern U. S. north into Canada; winters from the Carolinas through the Gulf States; common but locally distributed in N. E.; south in Sep. and Oct.; north in May. Frequents orchards. Nests in holes of trees and about buildings. Song, a continuous bubbling melody. In autumn and winter, seeks the shelter of brush heaps and thickets.



CC, R, c, 1. 1-4.

- 1*. WESTERN HOUSE WREN, *T. A. PARKMANII*. Differs from 1 in being much paler with back usually barred with dusky. Breeds throughout western U. S. and Canada, east to Ill; winters in Mexico.

d. Little Wrens. Olbiorchilus.

Small wrens with rather short wings and tails; dark, much banded below with dusky.

1. WINTER WREN, *O. HIEMALIS*. 4.10; dark reddish-brown above; pale brownish beneath sprinkled on fore parts and banded behind with dusky. Upper wing coverts and sides of neck, spotted with white, fig. Fig. 367.

367. Breeds in northern portion of eastern U. S. and Canada from northern N. E. west to Mich. rarely south to Mass. and along the Alleghanies to N. C.; winters from southern N. E. rarely further north, to northern Fla. and along the Gulf coast to Tex.; south in Sep. and Oct.; north in April. Frequents dense thickets along walls and fences, remain-

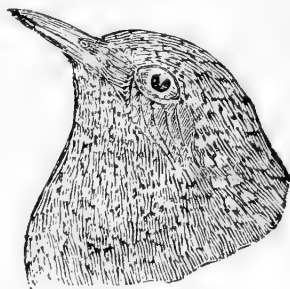


Fig. 368.

ing much in concealment. Song, an exquisite, but quickly given, melody.

CC, R, d, 1.

e. Marsh Wrens. Telmatodytes.

Small wrens with long, slender bills, short, rounded wings and tails; streaked with white on back. Nests, globular, entrance on side; eggs, brown.

1. LONG-BILLED MARSH WREN, *T. PALUSTRIS*. 5.25; dark-brown on head and back, reddish-brown elsewhere; streaks on back, line over eye and beneath, white, tinged with reddish on sides and flanks; tail barred with dusky, wings with whitish, fig. 368. Breeds chiefly east of the Alleghanies from Va. and Md. north to western N. Y. and Mass.; winters south to the Carolinas; south in Sep. and Oct.; north in



CC, R, e, 1. 1-3. May. Frequents very wet marshes. Nests,

attached to reeds, grass stems and bushes. Song, often given in flight, a bubbling melody, rising and falling, sometimes connected with trilling notes. Flight, weak and fluttering. Local in distribution.

1*. MARIAN'S MARSH WREN, *T. P. MARIANAE*. Differs from 1 in being smaller and much darker and more heavily banded. Breeds on the coasts of the Carolinas; winters in western Fla.

1**. LOUISIANA MARSH WREN, *T. P. THRYOPHILUS*. Differs from 1* in being smaller and paler; crown with median stripe, often wide, upper tail coverts often unbarred. Coast of La. and Tex.

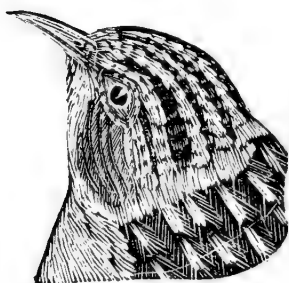
1***. WORTHINGTON'S MARSH WREN, *T. P. GRIS-EUS*. Differs from 1* in being much paler and grayer with black of upper parts not as extended; top of head and back, olive; white streakings, few. South Atlantic coast from southern S. C. to northern Fla.

f. Meadow Wrens. *Cistothorus*.

Very small wrens; bills, short and slender, head and back streaked with white. Nests, in sedges, globular; eggs, white.

1. SHORT-BILLED MARSH WREN, *C. STELLARIS*. 4.25; dark-brown above streaked on head and back with whitish,

Fig. 369.



CC, R, f, 1.

banded elsewhere with buff; white beneath tinged with buff on breast and sides, fig. 369. Breeds in eastern N. A. from southern N. H. and Manitoba south to the Gulf coast; winters in the Gulf States; south in Sep.; north in May. Frequents sedgy, not very wet, marshes in summer, dry savannas in winter. Song, an oft-repeated tinkle somewhat like the sound produced by a light hammer striking an anvil with a sharp blow then rebounding three or four times; never given on the wing; more often heard during cloudy weather or by night.

S. CREEPERS. Certhiidae.

Small, slender-billed birds with broad, long wings, large, strong feet fitted for creeping about trees.

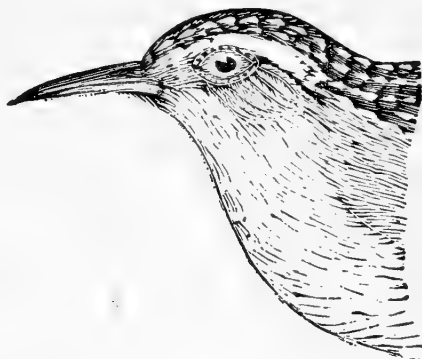
a. Tree Creepers. Certhia.

Bill, long and strongly curved; tail, long, with pointed, stiffened feathers. Nests, behind strips of loosened bark; eggs, spotted.

1. BROWN CREEPER, *C. AMERICANA*. 5.50; brown above streaked with white; rump, rusty; dull, silky-white beneath, fig. 370. Breeds in

Fig. 370.

eastern N. A. from Mass. north into the British Provinces, also south along the higher mountains to N. C.; south in winter to northern Fla.; south in Oct.; north in April. Frequents open woodlands, groves, and ornamental trees everywhere. Creeps spirally up trees then drops to the base of either the same tree or another to reascend. Usual note, a thin, sharp lisp; also a crack-



CC, S, a, 1.

ling cry and a rather unusual silvery, tinkling song.

T. NUTHATCHES. Sittidae.

Small birds with straight bills, long wings, short tails and large feet; fitted for climbing trees; descend head downward. Nests, in cavities usually excavated by the birds; eggs, white spotted.

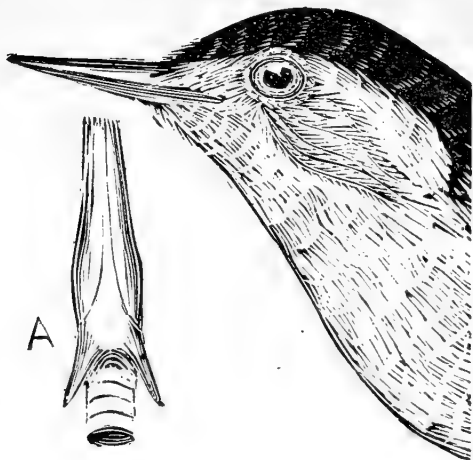
a. Nuthatches. Sitta.

Characters as above.

1. WHITE-BELLIED NUTHATCH, *S. CAROLINENSIS*. 6.00; bluish-gray above; top of head and hind neck, black; beneath, white; chestnut on under tail coverts; excepting

central feathers, tail black with a band of white, fig. 371.

Fig. 371.



CC, T, a, 1.

the familiar call of the Flicker. Common.

1*. FLORIDA WHITE-BELLIED NUTHATCH, *S. c. ATKINSI*. Differs from 1 in being smaller, a little darker, more grayish-white beneath, with flanks tinged with grayish. Female, with head black, or nearly so. Fla. west along the Gulf coast to Miss., north to the coast region of N. C. where it intergrades with 1. Has a singular low, warbling song given usually while flying restlessly about.

2. RED-BELLIED NUTHATCH, *S. CANADENSIS*. 4.50; differs from 1 in color in having a black line through eye broadening out behind it; hind neck like back, strongly tinged with reddish beneath, fig. 372. Female has the head line bluish and is lighter below. Breeds in the forests of northern N. A. from Mass. to Labrador south along the higher Alleghanies to N. C. south in winter from Mass. to the extreme southern states; south in Aug., Sep., and Oct.; north in April. Notes, a little sharper than 1, and more deliberate when breeding. Found nearly everywhere, but most commonly in woodlands.

Female, with black of head obscured by bluish. Breeds throughout eastern U. S. into the British Provinces, south into the Carolinas, west to the eastern margin of the Great Plains; chiefly resident. Frequents alike woodlands, orchards and ornamental trees. Ordinary call, a harsh "Cach" also an interrupted series of calls given in a rather minor tone, suggesting

3. BROWN-HEADED NUTHATCH, *S. PUSILLA*. 4.00; dark-bluish above; crown and hind neck, brown; spot on nape, white; beneath, dull white; tail, save central feathers, black, with an indistinct band of white. Resident in the coast pine belt from southern Del. to Tex.; casually north to N. Y., Mich., etc.; Great Bahama Island. Note, a harsh, solemnly given "*Cach*" often repeated. Gregarious. Fig. 373.



CC, T, a, 2

U. WARBLERS. Sylviidae.

Our species are small birds with long wings, short deeply notched tails; bills, small with nostrils concealed.

a. Kinglets. *Regulus*.

Very small; crown with a bright spot; wing, with a single band of white in a dark area. Nests, in trees, globular; eggs, spotted.

1. GOLDEN-CROWNED KINGLET, *R. SATRAPA*. 3.50; grayish-green above; dull white beneath; top of head, orange, with a yellow and black line on either side, fig. 374. Female, with the orange crown spot. Breeds from northern N. E., northern N. Y., and northern Mich. north to Labrador, rarely south to Mass. and regularly along the Alleghanies to N. C.; winters from Mass. to northern Fla.; south in Oct.; north in April. Song, a rather feeble lisping trill; alarm and call, a feeble lisp. Found everywhere, most commonly in evergreen woodlands.



CC, T, a, 3. 1-4.

2. **RUBY-CROWNED KINGLET, *R. CALENDULA*.** Differs from 1 in having a partly concealed spot of ruby-red on crown with no other markings, although the female sometimes has this it is usually absent. Breeding range in the east similar to 1, but winters further south, to southern Fla. and Mexico; rarely north to Mass.; north in April; south in Sep. and Oct. Song, begins with a few lisping notes, runs into a clear, high warble, ending with some notes with a rising inflection. Occurs mostly in woodlands. Fig. 374.



CC, U, a, 1.

inflection. Occurs mostly in woodlands. Fig. 375.

V. GNATCATCHERS. *Poliophtilidae*.

Very small with short, rounded wings, long tails, rounded and white marked; bills, long, somewhat flattened; habits, flycatcher-like. Fig. 375.

a. Gnatcatchers. *Poliophtila*.

Characters as above.

1. **BLUE-GRAY GNATCATCHER, *P. CAERULA*.** 4.75; bluish-gray above; bluish-white beneath; U-shaped line on forehead extending back on sides of head, black; nearly whole of outer and terminal spot on two next tail feathers, white, fig. 376. Female, without black on forehead. Breeds from N. J. west to southern Mich. south to the Gulf States;



CC, U, a, 2. 1-3.

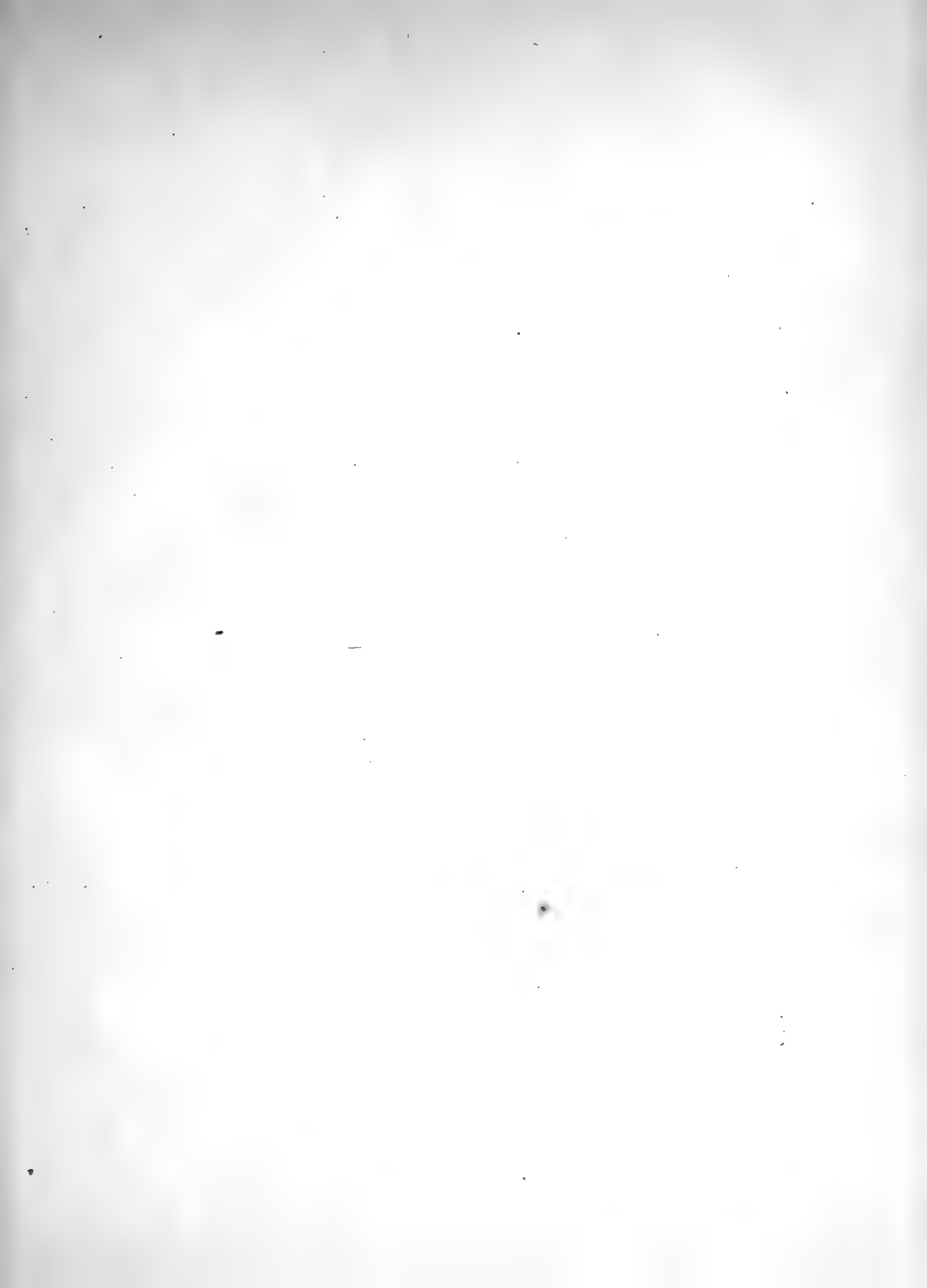
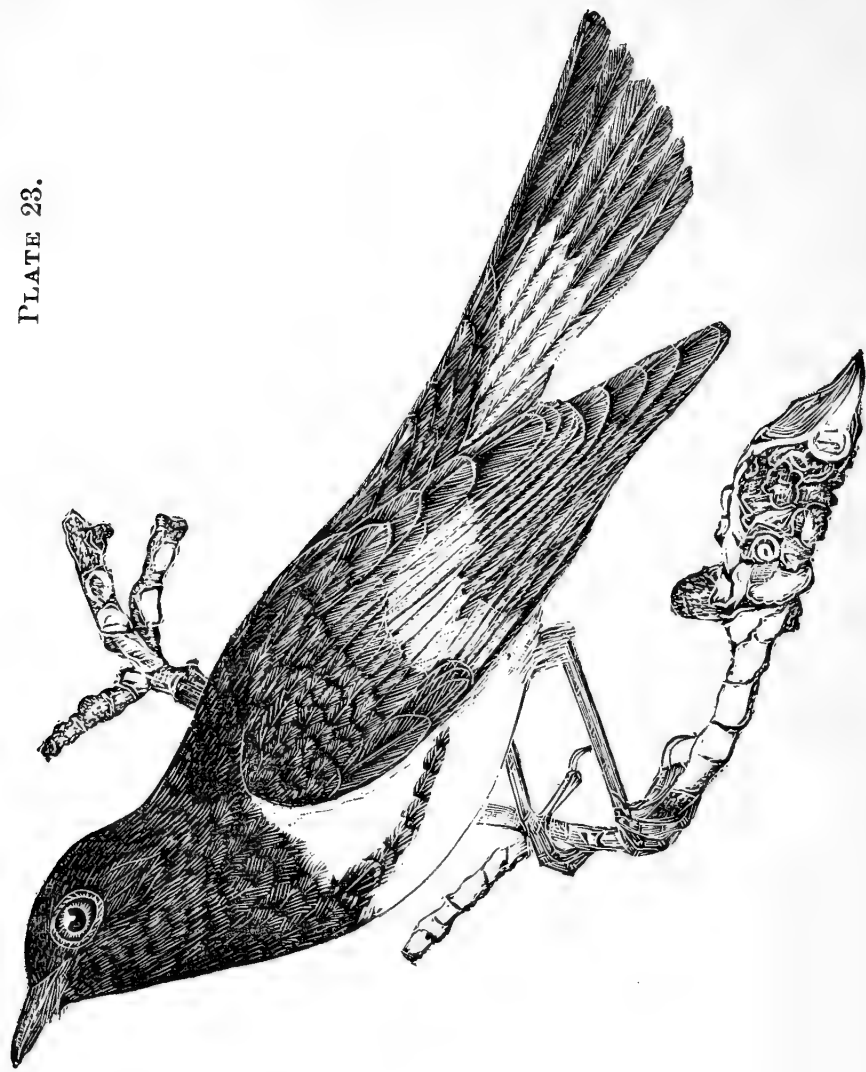


PLATE 23.



AMERICAN REDSTART.

accidental in N. E. and Minn.; winters in the Gulf States, Bahamas, and West Indies. Common. Nests in trees, hung from fork of limb; lichen-covered; eggs, spotted. Call note "See see" lispingly given; song, a low, tinkling, silvery warble. Very restless and active.

Fig. 376.



W. THRUSHES. Turdidae.

Medium to large Singing Perchers, well proportioned, for among them we find the ideal bird form, as well as the power of song developed to the highest degree; widely distributed throughout the temperate and tropical regions of the globe.

CC, V, a, 1.

a. Spotted Thrushes. Hylocichla. 1-4.

Medium-sized thrushes; wings, folding to middle of tail or a little beyond; bill, short; adults, spotted beneath; sexes, similar. Eggs, blue.

Fig. 378.—



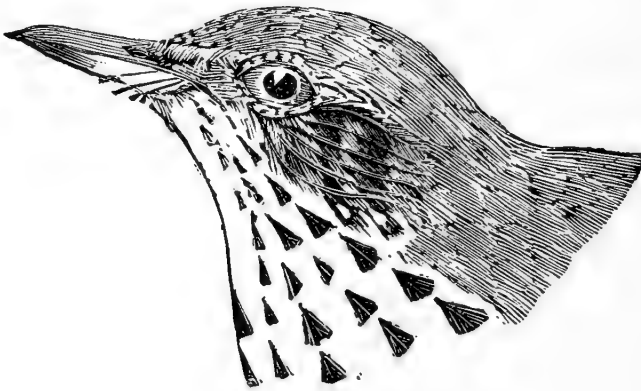
CC, W, a, 2.

wooded glens. Song, loud, clear, and bell-like; "*Tru-ral lu tru-ral lee*" are the louder notes with other lower variations; a rather harsh, stammering alarm. Nests, in trees; eggs, unspotted.

1. WOOD THRUSH, H. MUSTELINUS. 8.25; above reddish-brown, decidedly brighter on head; white beneath marked nearly everywhere with spots of dark-brown, fig. 377 page 272. Breeds in eastern U. S. from Va. and Kan. north to Canada; winters in Central America; south in Sep.; north in May. Common, frequenting

2. HERMIT THRUSH, *H. PALLASII*. 7.00; tawny above, decidedly reddish on tail; white beneath, tinged with creamy on breast; spots, triangular, not extending on sides; eye ring, creamy, fig. 378. Breeds in eastern N. A. from Mass. (Barnstable, Plymouth, Worcester Counties, westward, and irregularly elsewhere), northern Alleghanies, and northern Mich. northward; winters from Northern States southward; north in April; south in Oct. Song, the finest of all our birds; there are four strains; 1, "*Oh twee twee twee*" clear and high; 2, "*E twter twter twter*" lower but pure; 3, "*Oh phera phera phera*" lower in tone, almost pathetic in terminal note, all prolonged; 4, "*E che te wete*" softly given, often almost in a whisper; method of giving song very varied; all of the four

Fig. 379.



CC, W, a, 3.

strains are seldom given successively, and while 1 is almost always given first, this may be followed by any of the others, from 2 to 4, thus the song may consist of from two (very rarely) to four strains, but I have never heard any note given in advance of one which should follow it; thus the combinations of notes are limited to seven, all of which I have heard given by a single bird on my own place in Barnstable;

alarm, a whistling "*Cluck.*" Frequents woodlands. Nests on ground; eggs, unspotted.

3. OLIVE-BACKED THRUSH, *H. SWAINSONII*. 7.00; uniform olive above; eye ring, sides of head, and breast, reddish-buff; spots beneath, broadly triangular, fig. 379. Breeds in eastern N. A. from the mountains of Penn. and N. Y., and northern N. E., northward; winters in S. A.; south in Sep. and Oct.; north in April and May. Song, differs from 2 in being lower in scale; alarm like 2. Frequents heavy woodlands. Nests in low trees or bushes; eggs, spotted.

4. GRAY-CHEEKED THRUSH, *H. ALICIAE*. Differs from 3 in having the eye ring and sides of head grayish-white and the breast with

Fig. 380.



CC, W, a, 5.

little or no tingeing of buff. Breeds in eastern N. A. chiefly north of the U. S.; winters in Central America; south in Sep. and Oct.; north in May. Common, frequenting woodlands and copses. Song, as heard here in West Newton, almost exactly like that of 5, but rather lower.

4*. BICKNELL'S THRUSH, *H. A. BICKNELLI*. Differs from 4 in being smaller. Breeds on the mountains of the northeastern States and Nova Scotia. Migration as in 4. Song (as heard in West Newton, Mass.), begins with two or three notes similar to those of 1, and terminates like 4.

5. WILSON'S THRUSH, *H. FUSCESCENS*. 7.00; reddish-tawny throughout above; white beneath; eye ring, sides of head and breast, pale buff; spots confined to upper breast and very pale reddish-brown, fig. 380. Breeds from northern N. J.

west to northern Minn. north into the British Possessions; winters chiefly south of the U. S. Common, frequenting moist thickets. Song, a series of fife-like notes, beginning softly, gradually decreasing in volume, and ending imperceptibly; the exact tone and effect produced by it are indescribably weird; alarm, a whistled "*Pheu.*" Nests on the ground; eggs, unspotted.

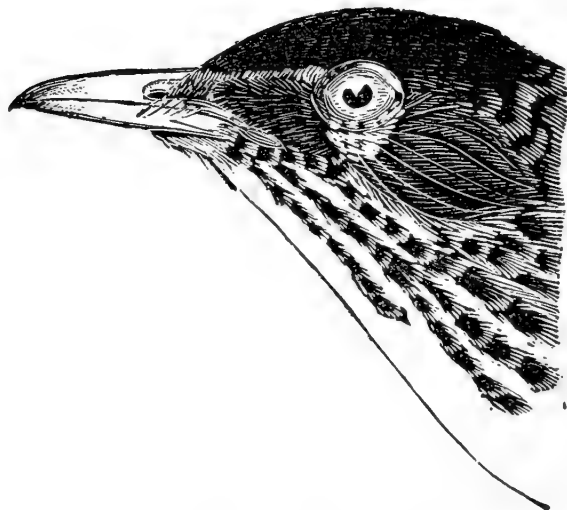
5. NEWFOUNDLAND THRUSH, *H. F. FULIGINOSA*. Differs from 5 in being paler above and more indistinctly spotted below. Breeds in Newfoundland.

b. Thrushes. *Turdus*.

Larger than *a*; wings, longer; white line over eye.

1. RED-WINGED THRUSH, *T. ILIACUS*. 8.50; brownish above; line over eye, stripe on sides of throat, and middle portions below, white; sides and flanks, reddish; breast, streaked with dusky. Northern Europe and Asia; accidental in Greenland.

Fig. 381.



c. Unspotted Thrushes. Planesticus.

Larger; wings, not extending beyond tail; not spotted below in adults.

1. AMERICAN ROBIN, *P. MIGRATORIA*. 10.00; ashy-gray above; top of head, black; golden-brown beneath; throat, white, streaked with black; bill, yellow, fig. 381. Female, duller. Young, spotted with dusky above and below. Breeds in eastern N. A. from the Atlantic to the Rockies, north of N. C.; winters from Canada southward to the Gulf States; south in Oct. and Nov.; north in March and April. Found everywhere. Song, loud and hurriedly given; variable, but a usual form is, "*Chip cherry chip*" with other notes; a single sharp whistle of inquiry; the young, when nearly fledged, give a practicing song, similar to the adult, uttered with closed bill, and thus low and muffled. Nests in trees and bushes, sometimes within buildings or about them; eggs, unspotted.

d. Western Thrushes. Hesperocichla.

Differ from *b* in having proportionately larger feet, and black markings below, and varied wings.

1. VARIED THRUSH, *H. NAEVIA*. Differs from *a*, 1 in having top of head like back; throat, unstreaked and with under parts, wing bands, other wing markings, and line over and behind eye, brownish yellow; band across breast and patch on side of head, black. Breeds on the Pacific coast of N. A.; accidental in N. J., N. Y., and Mass.

X. STONE CHATS AND BLUEBIRDS.

Saxicolidae.

Smaller than *W*, with longer wings, always folding beyond middle of tail. In our species, nests, usually in holes; eggs, blue, unspotted.

a. Stone Chats. Saxicola.

No bright colors; base of tail, white; no spots in adults.

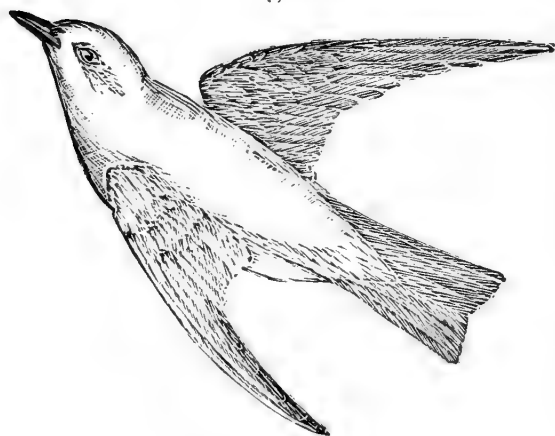
1. GREENLAND WHEATEAR, *S. LEUCORHOA*. 6.50; ash-gray above, terminal third of tail, black, remainder with tail coverts, forehead, line over eye, and lower parts behind, white, otherwise plain buff below; patch on side of head, black; in winter, strongly tinged with cinnamon. Breeds in Iceland, Greenland and Labrador, straggling south to Nova Scotia, Me., N. Y., and Bermuda; accidental in La.; winters in northern Africa, Labrador birds reaching their winter quarters via Greenland and the British Isles.

b. Bluebirds. *Sialia*.

Prevailing color above, bright blue, unspotted in adults; no white on tail.

1. BLUEBIRD, *S. SIALIS*. 7.00; cobalt-blue above;

Fig. 382.



throat, breast, and sides deep cinnamon; remaining under parts, white, fig. 382. Female, much duller. Young, reddish above, spotted with white; wholly white beneath, streaked with reddish-brown. Breeds from Ga. north to the British

CC, X, b, 1. 1-4.

Rockies; winters

from the Middle States to the Gulf; south in Oct. and Nov.; north in Feb. and March. Common, frequenting the open country. Call song, of three notes, often repeated, "*Cheer-i-ly*" given by both sexes and the young; song, by the male, a low, sweet warble, uttered sometimes in flight or when perched with fluttering wings. Catches insects on the ground but flies to perch to eat them. Flight, rather indirect and wabbling.

1*. FLORIDA BLUEBIRD, *S. s. GRATA*. Differs from 1 in having larger bill and feet and in being considerably deeper in color, a more purple-blue above and a deeper, richer cinnamon beneath. Resident in Fla.

EXTINCT SPECIES.

The following species have been described by authors, as inhabiting our section, but have not been taken recently anywhere. Not included in key.

GREAT AUK, *ALCA IMPENNIS*. Form of Razor-bill. Above, black, with large spot in front of eye, and beneath, white. Length, 30.00; wing, 5.50. Formerly abundant on our coast, but last seen over sixty-six years ago.

LABRADOR DUCK, *CAMPOTOLEMUS LABRADORIUS*. 22.00; white, tinged with ashy; top of head, ring around neck, and middle back, and beneath, black. Former range, from N. J. northward. Has not been seen alive since the early 70s.

TOWNSEND'S BUNTING, *EUSPIZA TOWNSENDI*. Similar to the Black-throated, but with throat white. One specimen obtained, May 11, 1833, near New Garden, Pa. None have been seen since.

CARBONATED WARBLER, *PERISSOGLOSSA CARBONATA*. Differs from the Cape May Warbler in having yellow wing bands, no chestnut on cheeks nor white on tail. Known only from Audubon's description and colored plate of a specimen obtained at Henderson, Ky. in May, 1811.

BLUE MOUNTAIN WARBLER, *DENDROECA MONTANA*. Greenish above and yellow beneath, streaked on breast and sides with dusky; tail and wings, black. One specimen obtained by Wilson in the Blue Mountains, Va. years ago.

SMALL-HEADED FLYCATCHER, *WILSONIA MINUTUS*. Greenish above, and pale yellow beneath, with wings banded, and outer tail feathers patched, with white. Found by

Audubon and others, in the Middle States. There are no specimens of either this or the above now in existence.

CINCINNATI WARBLER, *HELMINTHOPHILA CINCINNATIENSIS*. Greenish above; yellow beneath; patch before eye and on ear, and line on sides of crown, black. Length, 4.75; wing, 2.50; tail, 1.85; A single specimen obtained by describer, F. W. Langdon, at Madisonville, Ohio, May 1, 1880.



BLACK AND YELLOW WARBLER.

KEY TO ORDERS.

I. WATER BIRDS.

a, bill, pointed.

1, dive from water.

2, dive from air.

3, dive from water and perch.

4, do not dive.

1, head, carried over body, neck thin; **A**, p. 11.

1, head, carried over body, neck, thick; **C**, **A**,

p. 16.

1, head, carried in advance of body; **B**, p. 14.

1, large, white; **E**, **B**, p. 29.

2, smaller; **F**, **C**, p. 48.

3, neck, very long; **E**, p. 34.

4, central tail feathers, very long; **E**, **A**, p. 27.

b, bill, hooked.

1, dive from water.

2, dive from air.

3, drop into water.

4, do not dive.

1, bill, slender; **N**, **A**, p. 120.

2, dark; **E**, **D**, p. 32.

3, large; **E**, **C**, p. 30.

4, swoop down for food; **F**, **A**, p. 27.

4, fly high over surface of water tail, forked,

E, **F**, p. 35.

4, ocean birds, fly close over surface; **D**, p. 21.

c, bill, compressed.

1, bill, black; **C**, **A**, a, p. 16.

2, bill, red; **C**, **A**, e, p. 20.

d, bill, conical.

1, small; **C**, **A**, d, p. 19.

e, bills, flattened, toothed.

1, **N**, excepting **A**, p. 120.

II. WADING BIRDS.

a, bill, not sharply pointed.

1, legs and neck, very long; bill, bent downward;

O, p. 144.

2, wings, long and pointed; flight, swift; **G**, p. 59.

3, wings, shorter; flight, slow with dangling legs;

M, p. 113.

b, bill, not strongly curved; size, large.

1, head and neck, naked; **J**, p. 110.

2, top of head only naked; **K**, p. 111.

3, head, feathered; **L**, p. 112.

c, bill, sharply pointed.

1, neck, bent in flight; **I**, p. 100.

d, bill, spoon-shaped or strongly curved.

1, neck, held straight in flight; **H**, p. 98.

III. LAND BIRDS.

a, bill, short and thick; feet, fitted for running.

1, flight, sudden, swift, and noisy; **P**, p. 145.

b, bill, weak.

1, wings, long; flight, swift and prolonged; **Q**, p. 150.

c, bill, strongly hooked.

*, diurnal.

1, head, without feathers; **R**, p. 154.

2, head, feathered; colors, not bright; **S**, p. 155.

3, head, nearly feathered; colors, bright; **T**, p. 169.

**, nocturnal.

1, plumage, long and fluffy; **U**, p. 169.

d, bill, somewhat curved.

1, tail, long, rounded; **V**, p. 174.

e, bill, chisel-shaped.

1, tail, stiff; tree climbers; **W**, p. 176.

f, wings, long; plumage, soft.

1, eyes, large; partly or wholly nocturnal; **X**, p. 181.

g, bill, small; wings, long.

1, inhabit chimneys; flight, swift; **Y**, p. 184.

h, size, very small; bill, long, slender.

1, much about flowers; **Z**, p. 184.

i, bill, long, pointed; wings, long.

1, head, crested; food, chiefly fishes; **AA**, p. 185.

j, small birds with flattened bills; songless.

1, food, insects, caught in flight; **BB**, p. 186.

k, singing birds; never large.

1, colors, varied; **CC**, p. 192.

KEY TO FAMILIES.

A, p. 11.

1, bill, slender; **B**, p. 12.

2, bill, thick; **B**, p. 13.

B, p. 14.

1, bill, pointed; p. 14.

C, p. 16.

1, neck, short; bill, compressed; black; **A**, a, p. 16.

2, neck, short; bill, compressed; red; **C**, e, p. 20.

3, bill, pointed; white beneath; **C**, b, p. 17.

4, bill, pointed; black or mottled beneath; **C**, c, p. 18.

5, small; bill, conical; **C**, d, p. 19.

D, ocean birds; p. 21.

1, very large; wings, long and narrow; **A**, p. 22.

2, size, variable; fly near the surface of water; **A**, p. 22.

E, p. 27.

a, bill, pointed.

1, central tail feathers, greatly elongated; **A**, p. 27.

2, tail pointed; large; **B**, p. 29.

3, tail and neck, long; **E**, p. 34.

b, bill, hooked.

1, very large; bill, long with prominent pouch; C, p. 30.

2, smaller; uniformly dark; D, p. 32.

3, tail, deeply forked; F, p. 35.

F, p. 37.

a, bill, hooked.

1, middle tail feathers, projecting; A, p. 37.

2, tail, square, rarely forked; B, p. 39.

b, bill, pointed.

1, dive from wing, C, p. 48.

2, bill, compressed; under mandible, projecting; D, p. 58.

G, p. 59.

1, habits, duck-like; small; A, p. 59.

2, legs, very long; B, p. 62.

3, wings, short; bill, very long; B, p. 62.

4, wings, long; flight, swift; D, p. 68.

H, p. 98.

1, bill, curved; B, p. 99.

I, p. 100.

1, no plumes on head or body; A, p. 101.

2, plumes on head or body or on both; B, p. 103.

J, p. 110.

1, bill, curved; A, p. 110.

K, p. 111.

1, bill, straight; A, p. 111.

L, p. 112.

N, p. 120.

- 1, bill, slender, not flattened; A, p. 120.
- 2, bill, flattened, widened at tip: B, p. 123.
- 3, bill, not noticeably widened at tip; C, p. 130.
- 4, size, small; tail, stiffened; D, p. 139.
- 5, larger; neck, nearly as long as head; E, p. 140.
- 6, very large; neck, longer than body; F, p. 143.

O, p. 144.

- 1, scarlet; A, p. 145.

P, p. 145.

- 1, small; A, p. 145.
- 2, larger; B, p. 146.

Q, p. 150.

- 1, bill, slender; A, p. 150.

R, p. 154.

- 1, head, destitute of feathers; A, p. 154.

R, p. 155.

- 1, wings, pointed; A, p. 156.
- 2, wings, short, rounded; B, p. 162.
- 3, wings, longer, slightly rounded; sail much; D, p. 163.
- 4, very large; tarsi feathered; E, p. 166.
- 5, very large; tarsus naked; F, p. 167.
- 6, wings, very long; G, p. 167.
- 7, legs, long; face without feathers; H, p. 168.

T, p. 169.

- 1, tail, long, pointed; A, p. 169.

U, p. 169.

- 1, color, pale; white beneath; A, p. 170.
- 2, darker: with ear tufts, if absent, banded or small and streaked: B, p. 170.
- 3, legs, long, nearly naked; C, p. 174.

V, p. 174.

- 1, black; bill, compressed; A, p. 174.
- 2, white beneath; bill, curved; B, p. 175.

W, p. 176.

- 1, climbing habits; A, p. 176.

X, p. 181.

1, partly or wholly nocturnal; A, p. 182.

Y, p. 184.

1, tail spiny; A, p. 184.

Z, p. 184.

1, green above; A, p. 185.

AA, p. 186.

1, belted beneath; A, p. 186.

BB, p. 186.

1, colors, plain; A, p. 186.

CC, p. 192.

1, wings, long; colors, dull; bill, not thickened; A, p. 192.

2, larger; wings, short; colors, bright; B, p. 194.

3, smaller; plumage, long, fluffy; B*, p. 196.

4, larger; black; C, p. 197.

5, smaller; streaked with white; D, p. 198.

6, bright colored, brightly iridescent with long tail, black with red wing patch, plain black, white above, or with brown head; E, p. 198.

7, bill, deeper at base than one half its length; F, p. 207.

8, small; rump, yellow; bill, strongly curved; G, p. 234.

9, small, about 5.00 long; yellow beneath or in patches, with black markings or streakings of reddish, darker above, or if no yellow, black and white or bluish and white, with occasionally chestnut markings; H, p. 234.

10, larger; wholly yellow beneath; I, p. 255.

11, greenish or olive above; streaked below; no yellow; J, p. 256.

12, tail, longer; tertiaries, long; K, p. 257.

13, wings, long; bill, small; capture food on wing; L, p. 259.

14, brown, crested; M, p. 263.

15, colors, bright; scarlet, etc; N, p. 264.

16, size rather large; bill, strongly hooked; O, p. 265.

17, smaller; greenish above; bill less hooked; P, p. 267.

18, bill, long; wing, short; tail, long; larger; Q, p. 270.

19, much smaller; bill, slender; brown above; R, p. 273.

20, small; bill, slender, curved; tail, long; tree climbers; S, p. 277.

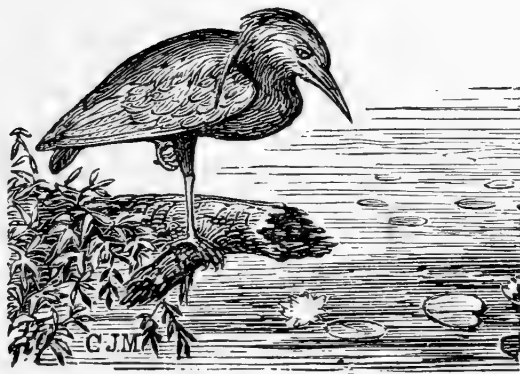
21, bill, straight; wings, long; tail, short; tree climbers; T, p. 277.

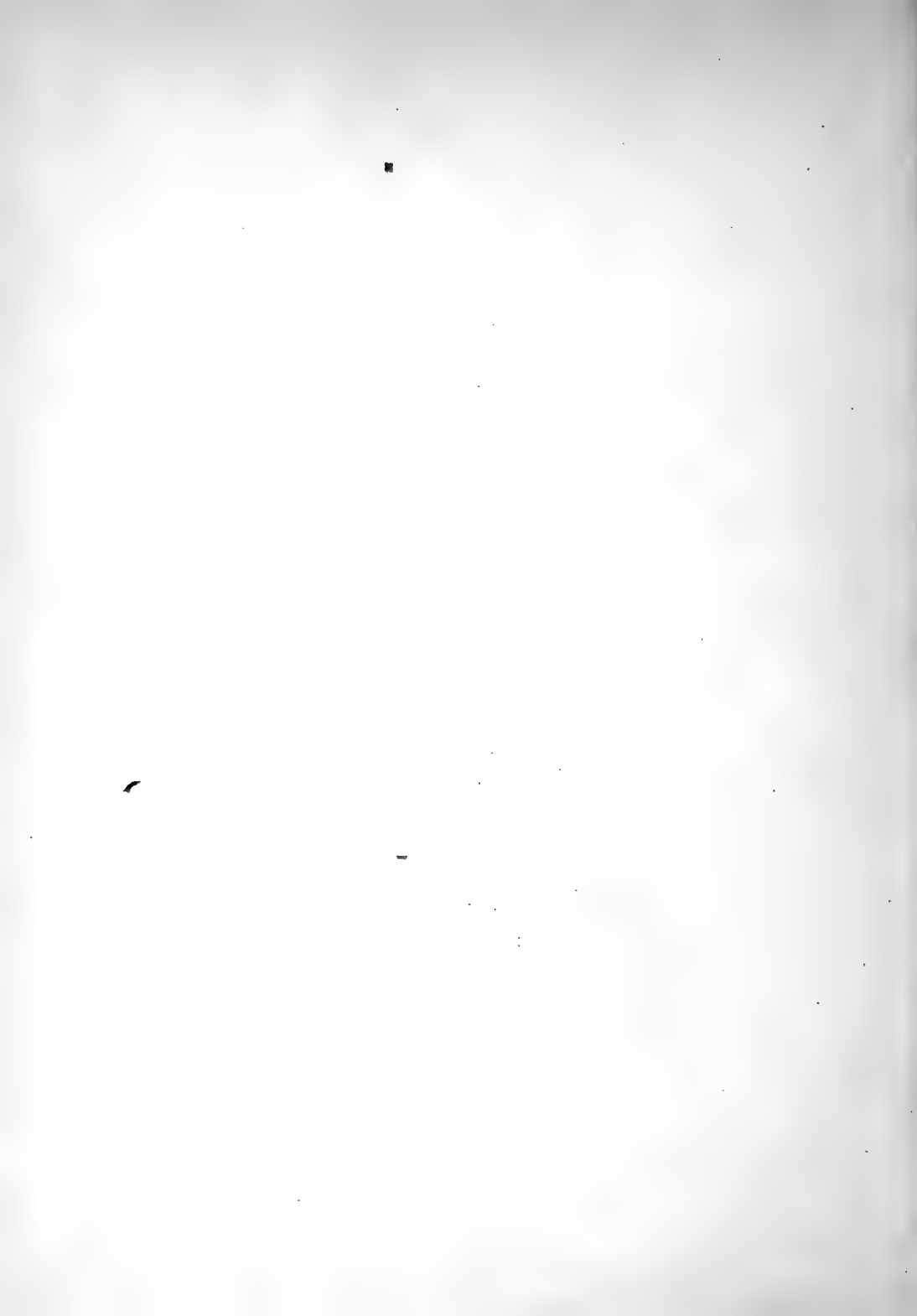
22, very small; greenish above; lighter below; crown patch, bright; U, p. 279.

23, small, bluish; tail, black with white markings; V, p. 280.

24, larger; brown above, spotted below, or else reddish below, unspotted; W, p. 281.

25, blue above, reddish below, or grayish above, buffy below, black patch on cheeks; X, p. 285.





- Acadian Sharp-tailed Sparrow 220
 Acanthus 226
 brewsteri 227
 exilipes 227
 l. holboellii 227
 hornmanii 227
 linaria 226
 rostrata 227
 Accipiter 162
 atricapillus 162
 cooperii 162
 velox 162
 Accipitridae 162
 Actitis, 184
 macularis, 184
 Actochelidon 50
 acutifrons 51
 maxima 50
 Actodromas 72
 bairdii 73
 cooperii 73
 fuscicollis 72
 maculata 72
 minutilla 74
 Aegialitis 92
 hiaticula 94
 meloda 94
 m. circumcincta 94
 semipalmata 93
 wilsonianus 95
 Aesalon 160
 columbarus 160
 regulus 160
 rishardsonii 160
 Aestrelata 25
 hasitata 25
 scalaris 25
 Agelaius 200
 bryanti 200
 phoeniceus 200
 p. floridanus 200
 Agreocantor 243
 kirtlandi 243
 Aix 129
 sponsa 129
 Ajaja 98
 ajaja 98
 Alaudidae 192
 Alauda 192
 arvensis 192
 Albatross 22
 yellow-nosed, 22
 Albatrosses 21
 yellow-billed, 22
 Alca 16
 torda 17
 Alcedinae, 185
 Alcidae 16
 Alder Flycatcher 191
 Alektorides 185
 Alle 19
 alle 19
 Allen's Ptarmigan 148
 American
 Avocet, 63
 Barn Owl 170
 Barn Swallow, 263
 Bittern, 101
 Black Tern 56
 Coot 119
 Crossbill 228
 Crow, 197
 Cookoos, 175
 Eider 135
 Flamingo 145
 Golden Plover 91
 Hawfinches 229
 Hawk Owl 173
 Herring Gull 44
 Golden-eye 132
 Golden Plover 91
 Goldfinch 228
 Goshawk 162
 Long-eared Owl 171
 Magpie 194
 Merganser, 120
 Osprey 167
 Oyster-catcher 97
 Paroquets 169
 Pipits 258
 Redstart 254
 Robin 285
 Rough-legged Hawk 165
 Scoter 136
 Sparrow Hawk 160
 Spoonbills 98
 Swifts 184
 Vultures 154
 Warblers 234
 Three-toed Woodpecker 179
 White-fronted Goose 141
 Woodcock 65
 Ammondrampus 218
 caudacutus 219
 fisheri 219
 maritimas 218
 m. macgillivrayi 219
 nelsoni 220
 nigrescens 219
 peninsulæ 219
 subvirgatus 220
 Ampelidae 263
 Ampelis 263
 cedorum 263
 garrulus 264
 Anas 123
 boschas 123
 fulvigula 125
 obscura 124
 o. rubripes 124
 Anatidae 123
 Ancient Murrelet 21
 Anhingas 34
 Anhingidae 34
 Anhinga 35
 Anis 174
 An Invitation, 1
 Anous 57
 stolidus 57
 Anser 141
 albifrons 141
 fabalis 141
 gambeli 141
 Anseres 120
 Anthus, 258
 pennsylvanicus 258
 pratensis 258
 spragui 258
 Antrostomus, 182
 carolinensis, 182
 vociferus, 182
 Aphelocoma 195
 floridana 195
 Aquila 166
 chrysoetos 166
 Aquilidae 166
 Arami 112
 Aramidæ 112
 Aramus 112
 giganteus 112
 Arboreal Ducks 129
 Arboreal Sparrows 207
 Archibuteo, 165
 sanctijohannis, 165
 Arctic
 Eiders 136
 Owls 174
 Tern 53
 Three-toed Woodpecker, 179
 Towhee 214

- Ardea, 103
 cinera, 104
 herodias 104
 occidentalis 103
 wardi, 104
 wurdemani, 103
 Ardeidae 103
 Ardetta 102
 exilis 102
 neoxena 103
 Arenaria 96
 interpres 96
 Arenariidae 95
 Arkansas King-bird 188
 Arquatella 71
 maritima 71
 Ashy Warblers 252
 Asio, 171
 accipitrinus 171
 wilsonianus 171
 Astur 182
 atricapillus 182
 Athenidae 174
 Audubon's,
 Caracara, 168
 Shearwater, 24
 Warbler 237
 Auk, Razor-billed, 17
 Great, 287
 Auks, Murres,
 Guillemots 16
 Auks 19
 Avocets and Stilts 62
 Avocets 62
 Avocet
 American 63
 Aythya 130
 americana 130
 vallisnerja 131
 Azuria, 238
 rara, 239
 Bachman's
 Sparrow 216
 Warbler 249
 Baeolophus 197
 bicolor 197
 Bahama
 Bananaquit 234
 Grassquit 233
 Ground Dove, 153
 Redwing 200
 Swallow 262
 Baird's
 Sandpiper, 73
 Bald Eagle, 167
 Northern, 167
 Baldpate 126
 Baltimore Oriole 201
 Bananaquits, 234
 Banded
 Jays 194
 Vireos, 268
 Woodpeckers 177
 Bank Swallow, 260
 Barn Owls 170
 Barnacle Goose 142
 Barred Owl, 170
 Florida, 170
 Barrow's Golden-eye, 133
 Bartramia, 82
 longicauda, 82
 Bartramian Sandpiper, 82
 Bay-breasted Warbler 241
 Bay Ducks, 130
 Bay-winged Sparrows 221
 Bean Goose, 141
 Bell's Vireo 270
 Belted Kingfisher 185
 Berwick's Wren, 274
 Bicknell's Thrush 283
 Bird
 Blue, 280
 Cat, 270
 Frigate, 35
 Indigo, 232
 King, 187
 Man's-War, 56
 Mocking, 27
 Oven 256
 Bird Owls 173
 Birds,
 Blue, 290
 Crying, 112
 Frigate, 35
 Shore, 50
 Snow, 214
 Tropic, 27
 Bitterns,
 American, 101
 Cory's Least, 103
 Least, 102
 Bitterns
 Little, 102
 Striped, 101
 Black
 Brant, 143
 Capped Petrel 25
 Crowned Night Heron, 103
 Cookoos, 175
 Duck, 124
 Faced Ducks, 140
 Guillemot, 18
 Gyrfalcon, 159
 Rail, 116
 Scoters, 186
 Skimmer, 58
 Kites, 150
 Vulaures, 155
 Woodpeckers 180
 Black and White Ducks 132
 Sparrows 222
 Warbler 235
 Woodpeckers, 178
 Black and Yellow Warbler, 238
 Black-bellied Plover 90
 Black-billed Cuckoo 176
 Blackbird
 Brewer's 203
 Red-winged 200
 Rusty 202
 Yellow-headed 202
 Blackbirds,
 Parasitical, 205
 Red-winged 200
 Rusty 202
 Yellow-headed 202
 Blackburnian Warbler 242
 Black-capped Petrel 125
 Black Duck 124
 Florida 125
 Red-legged 124
 Black-headed Grosbeak 231
 Black-necked Stilt 63
 Black-polled Warbler 240
 Black Skimmer 58
 Black-tailed Godwit 86
 Orioles 201
 Black-throated Blue Warbler 236
 Bunting 207

- Grebes 13
 Green Warbler 242
 Loon 15
 Black-whiskered Vireo 267
 Blue and White Herons 107
 Faced Gannet 30
 Bluebird 286
 Florida, 287
 Grosbeak 232
 Grosbeaks 232
 Headed Partridge Dove 153
 Jay 194
 Mountain Warbler 287
 Warblers 236
 Yellow-backed Warbler 247
 Bluebirds 286
 Blue-faced Gannet 30
 Blue gray gnatcatcher 280
 Blue Headed Partridge Dove 153
 Blue-winged Teal 127
 Warbler 248
 Boat-tailed Grackle 205
 Boat-tails 205
 Bobolink 206
 Bob-white 145
 Florida, 146
 Bob-whites 145
 Bohemian Waxwing 264
 Bonaparte's Gull 46
 Bonasa umbellus 147
 u. togata 147
 Booby 30
 Botauridae 101
 Botaurus 101
 lentiginosus 101
 Brant 143
 Black, 143
 Branta 142
 bernieri 143
 canadensis 142
 hutchinsii 142
 leucopsis 142
 minima 142
 nigricans 143
 Brewer's Blackbird 203
 Sparrow 210
 Brewsteria 166
 ferrugineus 166
 Brewster's Linnet 227
 Warbler 248
 Bridled Tern 55
 Broad-quilled Woodcocks 66
 European Woodcock 66
 Broad-winged Hawk 165
 Bronzed Grackle 203
 Brown Creeper 277
 Pelican 31
 Thrasher 273
 Brown-backed Cuckoos 175
 Brown-headed Nuthatch 279
 Brunnich's Murre 18
 Bubo 172
 saturatus 172
 virginianus 172
 v. subarcticus 172
 Bubonidae 170
 Buff-breasted Sandpiper 83
 Buffle-head 134
 Buffy Rails 116
 Sandpipers 83
 Sparrows 216
 Warblers 250
 Bulweria 25
 bulweri 25
 Bulweri's Petrel 25
 Bunting, Black-throated, 207
 Lark, 222
 Painted, 223
 Snow, 222
 Townsend's, 287
 Varied 233
 Buntings, Ground, 213
 Rice 206
 Silk 207
 Burrowing Owl 174
 Florida Addenda
 Burrowing Owls 174
 Bush Jays 195
 Warblers 239
 Buteo 163
 borealis 163
 b. calarus 164
 b. kriderii 163
 brachyurus 165
 buteo 164
 harlani 164
 latissimus 165
 lineatus 164
 I. alleni 165
 swainsoni 165
 Buteonidae 163
 Butorides 107
 virescens 107
 Buzzard, European, 164
 Buzzard Hawks 163
 Cackling Goose 142
 Cabot's Tern 51
 Caeruleocantor 236
 caeruleus 236
 e. carni 236
 Cairn's Warbler
 Calcarinus 223
 lapponicus 223
 ornatus 224
 pictus 224
 Calamospiza 222
 melanocorys 222
 Calidris 77
 arenaria 77
 Campephilus 180
 principalis 180
 Campotolemus labradorius 287
 Canachites 146
 canadensis 146
 Canada
 Goose 142
 Grouse 146
 Jay 195
 Canadian
 Pine Grosbeak 226
 Ruffed Grouse 147
 Warbler 254
 Canvas-back 131
 Cape May Warbler 238

- Caprimulgi** 181
Caprimulgidae
 182
Caracara,
 Audubon's 168
Caracaras 168
Caroonated Warbler
 287
Cardinalis 231
 Floridanus 22 3
Cardinals 231
 Cardinal Gros-beak 231
 Florida
Carns' Warbler
 236
Carolina
 Chickadee 196
 Junco 215
 Paronuet 169
 Rail 115
Carpodacus 225
 purpureus 225
Caspian Tern 50
Catbird 271
 Key West 271
Catbirds 271
Catharidae 154
Catharista 155
 atrata 155
Cathartes 154
 aura 154
Cedar Waxwing
 236
Centurus 177
 carolinus 177
Ceoplaeus 180
 b. abieticola 181
 pilaatus 180
Cephalides 16
Cephus 18
 grylle 18
 mandtii 19
Certha 277
 americana 277
Certhiidae 277
Cerulean Warbler
 239
Ceryle 180
 alcyon 185
Ceryllidae 185
Caeture 184
 pelagica 184
Gheturidae 184
Challichelidon 262
 cyaneoviridis 262
Changing Egret
 106
Charadriidae 89
Charadrius 91
 apricarius 91
 dominicus 91
Charitonetta 133
 albeola 134
Chat,
 Stone 270
Yellow-breasted,
 255
Chats 255
Chaulelasmus 125
 streperus 125
Chen 140
 caerulescens 140
 hyoerborea 141
 b. nivalis 141
Chestnut-collared
Longspur 224
Chestnut-sided
Warbler 240
Chickadee, 196
 Carolina, 196
 Florida, 196
 Hudsonian 197
Chimney Swift 184
Chipping Sparrow
 208
Chondestes 222
 grammacus 222
Chordeiles 183
 virginianus 183
 v. chapmani 183
Chroicocephalus 45
 atricilla 45
 franklinii 46
 miutus 47
 philadelphia 46
Chrysocantor 246
 aestiva 246
Chrysomitris, 228
 pinus, 228
 tristis, 228
Chuck-will's Wid-
ow 182
Ciconiae 110
Cincinnati Warbler
 288
Cinerosa 252
 philadelphia 252
Cinnamon Teal 128
Circus 157
 hudsonicus 158
Cistothorus 276
 stellaris 276
Clamatores 186
Clangula 132
 americana 132
 islandica 133
Clapper Rail 114
 Florida, 115
 Louisiana, 115
Clay-colored Spar-
row 209
Coccyidae 175
 americanus 175
 erythrophthalmus
 176
 minor 176
 m. maynardi 176
Cockaded Wood-
pecker 179
Coereba 234
 bahamensis, 234
Coerebidae 234
Colaptes 181
 auratus 181
 a. luteus 181
Colinus 145
 virginianus 145
 v. floridanus 146
Columba 150
 leucocephala 150
Columbidae 150
Columbigallina 152
 bahamensis 153
 passerina 152
 Colymbus 12
 holloellii 13
Common Tern 51
Compsothlypis 247
 americana 247
 a. ramalinae 247
 a. usneae 247
Connecticut Warbler
 251
Contopus 189
 borealis 189
 virens 189
Conurus 169
 carolinensis 169
Cooper's
 Hawk 162
 Sandpiper 73
Coot 119
Coot-footed Phalaropes 59
Coots, 119
 American, 119
 European, 120
Cormorant, 33
 Double-crested, 38

- Florida, 33
 Mexican 34
 Cormorants 33
 Corn Crake 117
 Corvidae 197
 Corvus 197
 americanus 197
 a. pascuus 198
 ossifraus 198
 principalis 198
 Coturniculus 216
 australis 217
 henslowii 217
 lecontei 218
 passerinus 216
 Coturnicops 116
 noveboracensis 116
 Cory's
 Gannet 30
 Least Bittern 107
 Shearwater 24
 Courlans 112
 Cowbirds 206
 Crake,
 Corn, 117
 Spotted, 116
 Crane,
 Sand hill, 111
 Whooping, 112
 Cranes 111
 Creciscus 116
 jamaicensis 116
 Creeper,
 Brown, 277
 Creepers, 277
 Honey, 234
 Tree, 277
 Creeping Warblers 255
 Crested
 Flycatcher 188
 Flycatchers 188
 Ibises 99
 Merganser 121
 Kingfishes 185
 Plover 89
 Terns, 50
 Crex 117
 crex 117
 Crosbybill,
 American, 228
 White-winged, 229
 Crossbills 228
 Crotophaga 175
 ani 175
 Crotophagidae 174
 Crow,
 American, 197
 Fish 198
 Florida, 198
 Crows 197
 Crying
 Birds 112
 Cranes 111
 Crymophilus 59
 fulcarius 59
 Cuban Sparrow
 Hawk 161
 Cuckoo,
 Black-billed, 176
 Maynard's 176
 Yellow-billed, 175
 Cuckoos, 174
 American, 175
 Black, 175
 Brown-backed, 175
 Cuculi 174
 Curlew
 Esquimo, 88
 Hudsonian, 88
 Long-billed, 86
 Curlews, 86
 Curlew Sandpiper 75
 Curved-billed
 Kites 157
 Sandpipers 75
 Cuvier's Kinglet 270
 Cyannocitta 194
 cristata 194
 C. floridana 194
 Cyanospiza 232
 caris 233
 cyanea 232
 versicolor 233
 Cygnidae 143
 Cygnus, 143
 Cypseli 184
 Dafila 129
 acuta 129
 Damsel Egrets 106
 Dendrocygna 143
 fulva 143
 Dendroica
 auduboni 237
 coronata 237
 montana 287
 Diabolic Petrels 25
 Diagram of Chip-
 ping Sparrows 9
 Dichromanassa 105
 pealei 106
 rufa 105
 r. mutata 106
 Dichromic Egrets 105
 Diomedidae 21
 Dipper Ducks 133
 Disked Owls 170
 Dolichonix 206
 oryzivorus 206
 Double-crested
 Cormorant 33
 Double-ringed Plo-
 ver 92
 Dove, 150
 Bahama Ground, 153
 Blue-headed par-
 tridge, 153
 Ground, 152
 Key West Quail, 153
 Reddy Quail, 153
 Zenaida, 152
 Dovekie 19
 Doves, 150
 Ground, 152
 Little, 152
 Quail, 153
 Mourning, 151
 Partridge, 153
 Short-tailed, 152
 Spotted, 151
 Dowitcher, 68
 Long-billed, 69
 Downy Woodpeck-
 er 178
 Northern, 178
 Southern, 178
 Dryobates 178
 borealis 179
 pubescens 178
 p. medianus 178
 villosus 178
 v. audubonii 178
 v. leucomelas 178
 Duck
 Black 124
 Florida Black, 125
 Fulvus Tree, 143
 Harlequin, 135
 Duck,
 Labrador, 270
 Masked, 140

- Red-legged Black, 124
 Ring-necked 132
 Ruddy, 139
 Rufous-crested, 130
 Wood, 129
 Ring-necked, 132
 Ducks,
 Arboreal, 129
 Bay, 130
 Black and White, 132
 Black-faced, 140
 Black-headed, 140
 Dipper, 133
 Fresh Water, 123
 Gravy, 125
 Long-Railed, 134
 Painted, 135
 River, 153
 Rudder, 131
 Sea, 130
 Spoon-billed, 128
 Sprig-tallied, 129
 Stiff-tailed, 139
 Tree, 145
 Dunlin 75
 Dunlin Sandpipers 74
 Dusky-backed Terns 55
 Dusky
 Horned Owl 172
 Owls 170
 Rails 116
 Seaside Sparrow 219
 Vultures 154
 Dytes 13
 auritus
 Eagles, 13
 Bald, 167
 Golden, -66
 Gray Sea, 167
 Northern Bald, 167
 Eagles 166
 Fish, 157
 White-railed, 167
 Vulture, 168
 Eared Owls 172
 Ectopistes 151
 migratoria 151
 Egret, 105
 Changing, 106
 Peale's, 106
 Poddish, 105
 Egrets, 105
 Damsel, 106
 Dichrom ic, 105
 Eider, 135
 American, 135
 King, 136
 Northern, 136
 Eiders, 135
 Arctic 136
 Elanus 157
 leucurns 157
 Elanoides 156
 forficatus 156
 Empidonax 190
 flaviventris 192
 minimus 190
 trailli 191
 t. alnorum 191
 virescens 191
 Ereunnetes 76
 occidentalis 77
 pusillus 77
 Erismatura 139
 rubia 139
 Erismaturidae 139
 Esquimo Curlew 88
 Eritonetta 136
 spectabilis 136
 Erola 75
 ferrugenea, 75
 Euethia 233
 bicolor 233
 canora 233
 European
 Buzzard 164
 Coot 120
 Blue Heron 104
 Snipe 68
 Teal 127
 Woodcock 66
 Evening Grosbeak 230
 Everglade Kite 157
 Falcon,
 Prairie 162
 Falcones 155
 Falconidae 158
 Falcons 158
 Gray 162
 Noble 159
 Feather-legged
 Hawks 165
 Stints 71
 Ferrugneus Hawk 166
 Fighting Sandpip-
 ers
 Field Sparrow 209
 Western 209
 Warblers 243
 Field Warblers, 243
 Fisher's Seaside Sparrow 219
 Finch
 Purple 225
 Finches
 Rosy 225
 Fish
 Crow 198
 Eagles 167
 Hawks 167
 Fisher's Seaside Sparrow 219
 Flamingo American 145
 Flamingoes 145
 Flicker 181
 Northern 181
 Flickers 181
 Florida
 Barred Owl 170
 Black and White Ducks 132
 132
 Black Duck 125
 Blue Jay 194
 Bob White 146
 Cardinal 232
 Cormorant 33
 Chickadee 196
 Clapper Rail 115
 Gallinule 117
 Grackle 204
 Grasshopper Spar-
 row 217
 Jay 195
 Meadow Lark 199
 Night Hawk 183
 Pine Warbler 244
 Red-wing 200
 Red-shouldered Hawk 165
 Screech Owl 173
 Towhee 213
 Turkey 150
 White-bellied Nuthach 270
 Florida 107
 caerulea 107
 Flycatcher
 Alder 191
 Fork-tailed 189
 Great-crested 191
 Least 190
 Olive-sided 190

- Scissor-tailed 187
 Trail's 191
 Yellow-bellied 192
 Flycatchers
 Crested 188
 Little 190
 Tyrant 186
 Flycatching Warblers 253
 Fork-tailed
 Flycatcher 187
 Frigate Birds 33
 Humming Birds 185
 Kites 156
 Sooty Petrels 26
 Foster's Tern 52
 Four-toed Plovers 89
 Fox-colored Sparrow 213
 Franklin's Gull 46
 Fratercula 20
 arctica 20
 a. glacialis 20
 aquila
 Fregatidae
 Frigate Birds 35
 Frigates 36
 Fringe-footed Phalaropes 60
 Fringillidae 207
 Fruticantor 246
 discolor
 Frontiornis 251
 formosa 251
 Fulica 119
 americana 119
 atra 120
 Fulicidae 119
 Fuligula 131
 affinis 132
 Collaris 132
 marila 131
 Fuligulidae 130
 Fulmar 22
 Lesser 23
 Fulmars 22
 Fulmarus 22
 glacialis 22
 g. minor 22
 Fulvous Tree Duck 143
 Gadwall 125
 Galoscoptes 271
 carolinensis 271
 c. grisifrons 271
 Gallinago 67
 delicata 67
 gallinago 68
 Gallinula 117
 galeata 117
 Gallinule
 Florida 117
 Purple 118
 Gallinules 117
 Gallinulidae 117
 Gannet 29
 Blue-faced 30
 Booby 30
 Cory's 30
 Red-faced 30
 Gannets 29
 Garrulidae 194
 Garzetta 105
 Gandidissima 105
 Gavia 15
 arcticus 15
 imber 15
 lumme 15
 Geese 140
 Gray 141
 Short-billed 142
 White 140
 Gelochelidon 49
 nilotica 49
 Gennaia 162
 mexicanus 162
 Geothlypis 252
 trichas 253
 t. brachadactyla 253
 t. ignota 253
 Geotrygon 153
 chrysea 153
 montana 153
 Giant Terns 49
 Glaucous Gull 42
 Glossy Imiter 100
 Goatsuckers 181
 Gnatcatchers
 Blue-gray 280
 Godwit
 Black-tailed 86
 Hudsonian 86
 Marbled 85
 Godwits 85
 Golden Eagle 166
 Golden Eye 132
 Barrow's 133
 Golden Crowned Kinglet 279
 Sparrow 211
 Golden Plover 91
 Golden-winged Warbler 241
 Goldfinch American 228
 Golden Warblers 246
 Goldfinches 228
 Goose
 American White-fronted 141
 Barnacle 142
 Bean 141
 Blue 140
 Cackling 142
 Canada 142
 Greater Snow 141
 Hutchins's 142
 Lesser Snow 141
 White-fronted 141
 Goshawk American 162
 Grackle
 Boat-tailed 205
 Bronzed 203
 Florida 204
 Purple 204
 Grackles 203
 Boat-tailed 205
 Grasshopper Sparrows 216
 Grass quit
 Bahama 233
 Melodious 233
 Grass Sparrows 220
 Gray
 Ducks 125
 Falcon 162
 Geese 141
 Gyr Falcon 138
 Jays 195
 Kingbird 188
 Owls 171
 Sea Eagles 167
 Gray-cheeked Thrush 283
 Gray-headed Junco 215
 Great
 Auk 287
 Black-backed Gull 42
 Blue Heron 104
 Gray Owl 171
 Horned Owl 172

- White Heron 103
 Greater Redpoll 227
 Shearwater 23
 Snow Goose 141
 Yellow-legs 78
 Grebe
 Holboell's 13
 Horned 13
 Pied-billed 13
 Grebes 11
 Black-throated 13
 Long-billed 12
 Short-billed 13
 Slender-billed 12
 Thick-billed 13
 Green and White Swallows 262
 Green-backed Hummingbird 185
 Green-crested Flycatcher 191
 Green Herons 107
 Greenland Redpoll 231
 Green Sandpiper 80
 Greenshanks 79
 Green-winged Teal 126
 Green Warblers 242
 Grennell's Water Thrush 257
 Grosbeak
 Black-headed 231
 Canadian Piner 226
 Cardinal 231
 Evening 230
 Rose-breasted 230
 Grosbeaks
 Blue 232
 Cardinal 231
 Song 232
 Ground
 Buntings 213
 Dove 152
 Owls 174
 Sparrows 160
 Warblers 245
 Grouse, Quail, etc. 145
 Grouse 146
 Canada 146
 Canadian Ruffed 147
 Prairie 149
 Prairie Sharp-tail 149
 Ruffed 147
 Sharp-tailed 149
 Spruce 146
 Wood 146
 Grues 111
 Gruidae 111
 Grus 111
 americana 111
 mexicana 111
 Guara 99
 alba 99
 Guillemot
 Black 18
 Mandt's 19
 Guillemots 16-8
 Guiraca 232
 coerulea 232
 Gull
 American Her-
 ing 44
 Bonaparte's 46
 Franklin's 46
 Glaucous 42
 Great Black-
 backed 42
 Herring 42
 Iceland 44
 Ivory 40
 Kittiwake 41
 Gull
 Kumlien's 44
 Laughing 45
 Little 47
 Mew 45
 Ring-billed 44
 Ross's 47
 Sabine's 48
 Siberian 42
 Terns 49
 Gulls 39-41
 Fork-tailed 48
 Hooded 45
 Hunter 38
 Ice 40
 Ocean 41
 Rosy 47
 Gyr Falcon
 Black 159
 Gray 158
 White 158
 Gyrfalcons 158
 Haematopodidae 97
 Haematopus 97
 ostralegus 97
 palliatu8 97
 Hairy Woodpecker 178
 Haliaetidae 167
 Haliaetus 167
 alascanus 167
 albicilla 167
 leucocephalus 167
 Haliplana 55
 anaethetus 55
 fuliginosa 55
 Haralda 134
 hyemalis 134
 Harland's Hawk 164
 Harlequin Duck 135
 Harriers 157
 Harris's Sparrow 211
 Hawfinches
 American 229
 Hawk
 American Rough-
 legged 165
 American Spar-
 row 160
 Broad-winged 165
 Cooper's 162
 Cuban Sparrow 160
 Duck 159
 Ferrugineous 165
 Florida Red-
 shouldered 165
 Harland's 164
 Krider's 163
 Marsh 158
 Pigeon 160
 Red-shouldered 164
 Red-tailed 163
 Rough-legged 165
 Sharped-shinned 162
 Short-tailed 165
 Sparrow 169
 Swainson's 165
 Western Redtail 164
 Hawk Owl, Ameri-
 can 155
 Hawks
 Buzzard 163
 Feather-legged 165
 Fish 167
 Naked-legged 163

- Sharp-shinned 162
 Short-winged 162
 Sparrow 160
 Wide-mouthed 166
 Hawks, Eagles, etc. 155
 Heath Hen 149
 Helenaia 251
 swainsonii 251
 Helminthophila 248
 bachmani 249
 celata 249
 chrysoptera 248
 lawrenci 248
 leucobronchialis 248
 peregrina 249
 pinus 248
 rubricapilla 249
 Herodias 104
 egretta 104
 Helmitheros 250
 vermivorus 250
 Helodromus 79
 ochropus 80
 solitarius 79
 Hen
 Heath 149
 Prairie 149
 Henslow's Sparrow 217
 Hermit Thrush 282
 Herodiones 100
 Heron
 Black-crowned Night 108
 European Blue 104
 Great Blue 104
 Great White 103
 Little Blue 107
 Little Green 107
 Louisiana 102
 Wurdeman's 103
 Ward's 104
 White 104
 Yellow-crowned Night 109
 Herons 100-103
 Blue and White 107
 Green 107
 Large 103
 Night 108
 Plumed 104
 Thick-billed Night 109
 Herring Gull 42
 Hesperiphones 229
 vespertina 230
 Hesperochchla 255
 naevia 285
 Hierofalco 158
 islandica 158
 rusticolus 158
 r. gyrfalco 158
 r. obseletus 159
 Highland Sandpip-ers 82
 Himantopus 63
 mexicanus 63
 Hirundinidae 259
 Hirundo 262
 erythrogastra 263
 Histrionicus 135
 histrionicus 135
 Hoary Redpoll 227
 Holboell's Grebe 13
 Redpoll 227
 Honey Creepers 234
 Honey Warbler 237
 Gulls 45
 Merganser 122
 Warbler 253
 Horned Grebe 13
 Larks 195
 Owls 172
 Horned Lark
 Northern 193
 Prairie 193
 House Wren 278
 Hudsonian Chickadee 197
 Curlew 88
 Godwit 86
 Hummingbird, Ruby-throated, 185
 Hummingbirds, 184
 Forked-tailed, 185
 Hunter Gulls 38
 Hutchin's Goose 142
 Hydranassa 106
 ruficollis 106
 Hylatomus pileatus
- Hylocichla 281
 alicae 283
 a. bicknelli 283
 fuscescens 283
 f. fuliginosa 284
 mustelinus 281
 pallasii 282
 swainsonii 282
 Hydrochelidon 56
 leucoptera 57
 surinamensis 56
 Ibis 99
 Ibis, Glossy, 100
 Scarlet, 99
 White, 99
 White-faced Glossy, 100
 Wood, 110
 Ibises 98
 Crested, 99
 Naked-faced, 99
 Wood, 110
 Ice Gulls 40
 Icteria 255
 virens 255
 Icteridae 198
 Icterus 200
 icterus 200
 Ictinia 156
 mississippiensis 156
 Indigo Bird 232
 Introduction 3
 Iornornis martinica 118
 Ipswich Sparrow 228
 Iridoprocne 262
 bicolor 262
 Ivory-billed wood-pecker 180
 Ivory Gull 40
 Jaeger, long-tailed, 39
 parasitic, 38
 pomarine, 38
 Jaegers 38
 Jays
 Blue, 194
 Canada, 195
 Florida, 195
 Florida Blue, 194
 Labrador, 196
 Jays, Banded, 194
 Bush, 195

- Gray, 195
 Junco,
 Carolina, 215
 Gray-headed, 219
 Montana, 216
 Slate-colored, 219
 Junco 214
 caniceps 216
 carolinensis 215
 hyemalis 214
 montanus 216
 Kentucky Warbler 251
 Kestrel 161
 Key West
 Catbird, 271
 Quail Dove 253
 Vireo 270
 Killdeer Plover 92
 King
 Eider 13
 Rail 114
 King Bird 187
 Arkansas, 188
 Gray, 188
 King Birds 187
 Kingfisher,
 Belted, 185
 Kingfishers, 185
 Crested, 185
 Kinglet,
 Curvier's, Addenda
 Golden-crowned, 279
 Ruby-crowned, 280
 Kinglets 279
 King Rail 114
 Kirtland's Warbler, 243
 Kite,
 Everglade, 157
 Mississippi, 156
 Swallow-tailed, 156
 White-tailed, 157
 Kites, 156
 Black and White, 157
 Curve-billed, 157
 Fork-tailed, 156
 Prairie, 156
 Kittiwake Gull 41
 Knot 70
 Krider's Hawk 163
 Kumlien's Gull 44
 Labrador
 Duck 287
 Jay 196
 Lagopus
 lagopus 148
 l. alleni 148
 rupestris 148
 r. reinhardi 148
 welchi 149
 Land Rails 115
 Laniidae 265
 Lanius 265
 borealis 266
 ludovicianus 266
 migrans 266
 Lanivireo
 alticola 269
 flavifrons 268
 plumbeus 269
 solitarius 269
 Lapland Longspur 115
 Lapwing 89
 Large Herons 103
 Large-billed Plover 94
 Laridae 39
 Lark
 Bunting 222
 Florida Meadow, 199
 Meadow, 199
 Northern Horned, 193
 Prairie Horned, 193
 Sparrow 222
 Western Meadow
 Laniidae 265
 Larks, Horned 193
 Larus
 affinis 42
 argentatus 42
 canus 45
 delawarensis 44
 glaucus 42
 kumlieni 44
 leucopterus 44
 marinus 42
 smithsonianus 44
 Laughing Gull 45
 Lawrence's Warbler 248
 Leach's Petrel 26
 Least
 Bittern 106
 Flycatcher 190
 Sandpiper 74
 Tern 54
 Leconte's Sparrow 218
 Lesser
 Scaup 132
 Snow Goose 141
 Yellow-legs 78
 Limicolae 59
 Limosa
 fedoa 85
 haemastica 86
 limosa 86
 Limpkin 112
 Limpkins 112
 Lincoln's Sparrow 212
 Lineocantor
 castanea 241
 striata 240
 Linnet, Brewster's 227
 Little
 Auk 19
 Bittern 106
 Blue Heron 107
 Doves 152
 Flycatcher 190
 Green Heron 107
 Gull 47
 Teals 126
 Terns 54
 Warblers 247
 Lobe-footed Phalaropes 61
 Loggerhead Snake 266
 Long-billed
 Curlew 87
 Dowitcher 69
 Grebes 12
 Marsh Wren 275
 Rails 114
 Warblers 235
 Long-eared owl
 American, 171
 Longipennes 37
 Long-legged
 Petrels 26
 Sandpipers 69
 Longspur,
 Chestnut-collared, 223
 Lapland, 225
 McCown's, 223
 painted, 223
 Longspurs, 223

- Short-tailed, 224
 Long-tailed
 Ducks 134
 Jaeger 39
 Owls, 173
 parrots 169
 Pewees 69
 Pigeons 151
 Swallows 262
 Tropic Birds 28
 Wrens 273
 Long-winged
 Owls 171
 Pewees 190
 Swallows 263
 Swimmers 37
 Warblers 251
 Loon 23
 Black-throated, 15
 Red-throated, 15
 Loons 14-15
 Lophodytes 121
 cuculatus 122
 Louisiana
 Clapper Rail 114
 Heron 102
 Marsh Wren 276
 Water Thrush 257
 Lunda 20
 cirrhata 20
 Loxia 228
 leucoptera 227
 minor 228
 Macgillivray's Sea-side Sparrow 219
 Macrorhamphus 68
 griseus 68
 scolepaeus 69
 Maculocantor 238
 maculosa 238
 Magpie, American, 194
 Magpies 194
 Magpies and Jays 194
 Mallard 123
 Mandt's Guillemot 19
 Mangrove Cuckoo 176
 Man-of-war Bird 36
 Manx Shearwater 24
 Marbled Godwit 85
 Mareca 125
 americana 125
 penelope 126
 Marian's Marsh Wren 276
 Maryland Yellow-throat 253
 Marsh Hawk 158
 Sparrow 218
 Wren 275
 Martin, Cuban, 259
 Florida, 259
 Purple, 259
 Martins 259
 Masked Duck 140
 Maynard's Cuckoo 176
 McCown's Long-spur 224
 Meadow Lark 199
 Florida, 199
 Western, 199
 Meadow Larks 199
 Meadow Wrens 276
 Megalestus 37
 skua 38
 Megaquiscalus 205
 major 205
 Megascops 172
 asio 172
 a. floridanus 173
 Melanerpes 177
 erythrocephalus 177
 Meleagrididae 150
 Meleagris 150
 gallipavo 150
 g. oscuola 150
 Mellanitta 136
 deglandi 137
 fusca 138
 Melodious Grass-quilt 233
 Melospiza 211
 georgiana 212
 lincolni 212
 melodia 211
 Merganser, American, 120
 Hooded, 122
 Red-breasted, 121
 Meganser 120
 americanus 120
 serrator 121
 Crested, 121
 Tooth-billed, 120
 Merginidae 120
 Mergus 122
 albellus 123
 Merlin 160
 Richardson's 160
 Mew Gull 45
 Mexican Comorant 34
 Micropalama 69
 himantopus 69
 Milvidae 270
 Milvulus 186
 forficatus 187
 tryannus 186
 Mimidae 270
 Mimus 270
 polyglottus 271
 Mniotilta 233
 varia 235
 Mniotiltidae 234
 Mocking Bird 271
 Wrens 273
 Mockings Birds 270
 Mocking Birds and Thrashers 270
 Molothrus ater 206
 Motocilla 258
 alba 258
 Motacillidae 257
 Mottled Woodpecker 176
 Montana Junco 215
 Mountain Plover 95
 Vireo 269
 Mourning Dove 151
 Warbler 252
 Mississippi Kite 136
 Murre 18
 Brunnich's 18
 Ringed 18
 Murrelet, Ancient, 21
 Murres 17
 Myarchus 188
 crinitus 188
 Nail-billed Swimmers 120
 Waiders 144

- Naked-breasted Vultures 154
 Naked-faced Ibises 99
 Naked-legged Hawks 163
 Narrow-quilled Woodcocks 65
 Nashville Warbler 249
 Nelson's Sparrow 220
 Neodendroica 235
 dominica 235
 d. albilora 236
 Netta 130
 rufina 130
 Nettion 126
 carolinensis 126
 crecca 127
 Newfoundland Thrush 284
 Nighthawk 183
 Florida 183
 Nighthawks 183
 Night Heron, Black-crowned, 108
 Yellow-crowned 109
 Night Herons 108
 Night-jars 182
 Noble Falcons 159
 Noddie 57
 Noddies 57
 Nomonyx 140
 dominicus 140
 Northern Bald Eagle 167
 Blue Yellow-back 247
 Flicker 181
 Hairy Woodpecker 178
 Horned Lark 193
 Phalarope 62
 Loggerhead Shrike 266
 Raven, 198
 Shrike 266
 Yellow-throat 253
 Numenius 86
 borealis 88
 hudsonicus 88
 longirostris 86
 phaeopus 89
 Nuthatch, Brown-headed, 279
 Florida White-bellied 278
 Red-bellied, 278
 White-bellied, 277
 Nuthatches 277
 Nuttallornis 190
 borealis 190
 Nyctalea 173
 acadica 173
 richardsoni 173
 Nyctea 174
 nyctea 174
 Nyctinassa 109
 violacea 109
 Nycticorax 108
 naevius 108
 Ocean Gulls 41
 Oceanites 26
 oceanicus 26
 Oceanodroma 26
 leucorhoa 26
 Oethodromus 94
 wilsonius 95
 Odotoglossae 144
 Oidemia 136
 americana 136
 Olbiorchilus 275
 hiemalis 275
 Oldsquaw 134
 Olive-backed Thrush 220
 Olive-sided Flycatcher 190
 Oporornis 251
 agilis 251
 Olor 143
 buccinator, 144
 columbianus 144
 cygnus 144
 Orange-crowned Warbler 249
 Orange Warblers, 250
 Orchard Oriole 201
 Oriole, Blatimore, 201
 Orchard, 201
 Orioles, Black-tailed, 201
 Oricoris alpestris 193
 pratincta 193
 Oscines 192
 Osprey, American, 167
 Ospreys 167
 Oven Bird 256
 Owl, American Hawk, 173
 American long-eared 171
 Barn, 170
 Barred, 170
 Burrowing, 174
 Dusky Horned 172
 Florida Barred, 170
 Florida Burrowing, Addenda
 Florida Screech, 173
 Great Gray, 171
 Great Horned 172
 Richardson's, 173
 Saw-whet, 173
 Screech, 172
 Short-eared, 171
 Snowy, 174
 Owls, 169
 Arctic, 174
 Barn, 170
 Bird, 173
 Burrowing, 174
 Disked, 170
 Dusky, 170
 Eared, 172
 Gray, 171
 Ground, 174
 Horned, 172
 Long-tailed, 173
 Long-winged, 171
 Oxyechus 91
 vocifera 92
 Oystercatcher, 97
 American, 97
 Oystercatchers 97
 Pagophala 40
 alba 40
 Painted Buntings 233
 Ducks 135
 Longspurs 224
 Sparrows 232
 Warblers 254
 Palm Warblers 251
 Pandion 167
 carolinensis 167
 Pandonidae 167

- Parasitic Jaeger 38
 Paridae 196
 Paroquet, Carolina, 169
 Paroquets
 American, 169
 Parrots, Macaws, Etc. 169
 Partridge Doves 145
 Partridges 145
 Parrots, Long-tailed, 169
 Passerculus 220
 princeps 221
 savanna 220
 Passerella 213
 iliaca 213
 Passerina 223
 navalis 223
 Passenger Pigeon 151
 Pavoncella 81
 pugnax 82
 Peal's Egret 106
 Pectoral Sandpiper 72
 Pediocetes 149
 campestris 149
 Pelecanidae 30
 Pelecanus 31
 erythrorhynchus 31
 fucus 31
 Plegadis 99
 autumnalis 100
 guarauna 100
 Pelican,
 Brown, 31
 White, 31
 Pelicans 74
 Pelinda 74
 alpina 75
 sakhalina 74
 Pelionetta 138
 perspicillata 132
 Pendulinus 201
 spurius 201
 Penthestes 196
 atricapillus 196
 carolinensis 196
 c. impiger 196
 hudsonicus 197
 Perchers,
 Singing 192
 Songless, 186
 Perdidae 145
 Perisoreus 195
 canadensis 195
 c. nigracapillus 196
 carbonate 237
 tigrina 238
 Perisoglossa 237
 Petrel,
 Black-capped, 25
 Bulwer's, 25
 Leach's 26
 Scaled, 25
 Wilson's 26
 Petrels 22
 Diabolic, 25
 Fork-tailed, 26
 Long-legged, 26
 Sooty, 26
 Stormy, 25
 Wedge-tailed, 25
 Petrochelidon 260
 ulva 260
 lunifrons 260
 Pewee, Wood, 189
 Pewees, 189
 Long-winged, 190
 Phaethon 28
 aetherus 28
 flavirostris 28
 Phaetohntidae 27
 Phalacrocoracidae 32
 Phalacrocorax 33
 dilophus 33
 floridanus 33
 mexicanus 34
 Phalarope,
 northern, 62
 Red, 60
 Wilson's 60
 Phalaropes,
 Coot-footed, 59
 Frisged-footed 60
 Lobe-footed 61
 Phasiani 145
 Philadelphia Vireo 268
 Philohela 65
 minor 65
 Phoebe 189
 Say's 189
 Phoebes 188
 Phoenicopteridae 145
 Phoenicopterus 145
 ruber 145
 Pica 194
 hudsonica 194
 Piceacantor 241
 blackburnae 242
 Pici 176
 Picidae 176
 Picoides 179
 americanus 179
 articus, 179
 Pied-billed Grebe 13
 Pigeon Hawk 160
 Pigeon,
 Passenger 151
 white-crowned 150
 Pigeons 150
 Long-tailed 151
 Pileated Woodpecker, 180
 Northern, 181
 Pinacantor 244
 vigorsii 244
 v. florida 244
 Pine
 Grosbeaks 225
 Siskin 227
 Warbler 244
 Warblers 244
 Pine-woods Sparrow 216
 Pinicola 226
 canadensis 226
 Pin-tail 129
 Pipilo
 alleni 214
 arcticus 214
 erythrophthalmus 213
 Piping Plover 74
 Pipit
 American, 258
 Meadow 258
 Sprague's 258
 Plain Warblers 251
 Planesticus 285
 migratoria 285
 Plataleidae 98
 Plotidae 57
 Plover,
 American Golden 91
 Belted Piping, 94
 Black-bellied, 90
 Golden, 91
 Killdeer, 91
 Mountain, 95
 Piping, 94

- Ring, 94
 Semipalmated, 93
 Wilson's 95
 Plovers, 89
 crested, 89
 Double-ringed, 91
 Four-toed, 89
 Golden, 91
 Large-billed 94
 Ringless, 95
 Single-ringed, 94
 Plumbeous Vireo 269
 Plumed Herons, 104
 Pochards 130
 Podascys 95
 montana 95
 Podicipidae 12
 Podicipides 11
 Podilymbus 13
 podiceps 13
 Podilymbidae 13
 Polioptilidae 280
 Polioptila 280
 caerulea 280
 Polyboridae 168
 Polyborus 168
 cheriway 168
 Pomarine Jaeger 38
 Poocetes 221
 gramineus 221
 Porzana 115
 carolina 115
 porzana 116
 Prairie
 Falcon 162
 Grouse 149
 Hen 149
 Horned Lark 193
 Kites 156
 Sharp-tailed Grouse 149
 Sparrows 222
 Warbler 249
 Procellaria 25
 Belagica 25
 Procellaridae 22
 Progne
 cryptoluca 259
 subis 259
 s. floridana 259
 Prothonotary Warbler 250
 Protonotaria 250
 citrea 250
 Psittaci 169
 Psittacidae 169
 Ptarmigan,
 Allen 148
 Reinhardt's 148
 Rock, 148
 Welch's 148
 Willow, 148
 Large-billed, 20
 Ptarmigans 147
 Pucaea 216
 aestavalis 216
 a. bachmani 216
 Puffin 20
 Large-billed, 20
 Tufted, 20
 Puffins, 20
 Crested, 20
 Puffinus 23
 auduboni 24
 borealis 24
 fuliginosa 24
 gavis 23
 puffinus 24
 Purple
 Finch 225
 Gallinule 118
 Grackle 204
 Martin 259
 Sandpiper 71
 Pyrranga 264
 erythromelas 265
 ludoviciana 265
 rubra 265
 Quail Dove 153
 Key West, 153
 Ruddy, 153
 Quail Doves 153
 Querquedula 127
 cyanoptera 128
 discors 127
 Quiscalus 203
 aeneus 203
 agelaus 204
 quiscula 204
 Rail,
 Carolina, 115
 Clapper, 114
 Black, 116
 Florida Clapper 115
 King, 114
 Louisiana Clapper, 115
 Virginia 114
 Yellow, 115
 Rails,
 Buffy, 116
 Dusky, 114
 Land 114
 Long-billed, 114
 Short-billed 115
 True, 113
 Rails, Gallinules and Coots 113
 Ralli 113
 Rallidae 113
 Rallus 114
 crepitans 114
 elegans 114
 saturatus 115
 scottii 115
 virginianus 114
 Raven, Northern, 198
 Razor-billed Auk 17
 Recurvirostra 62
 americana 63
 Recurvirostridae 62
 Red-eyed Towhee 213
 Red-bellied
 Nuthatch 273
 Woodpecker 177
 Red-billed Tropic Bird 28
 Red-breasted Merganser 121
 Reddish Egret 104
 Red-eyed Towhee 213
 Vireo 267
 Red-faced Gannet 30
 Redhead 130
 Red-headed Woodpecker 177
 Red-legged Black Duck 124
 Red Phalarope 60
 Redpoll 226
 Greater, 227
 Greenland, 227
 Hoary, 227
 Holboell's 227
 Red-polled Warbler 245
 Redpolls 226
 Red-shouldered Hawk 164
 Florida, 165
 Redstart, American, 255
 Red-tailed Hawk 163
 Red-throated Loon 15
 Red-wing

- Bahama, 200
 Florida, 200
 Red-winged Black-
 bird 200
 Starlings 200
 Thrush 284
 Regulus 27
 calendula 280
 cuereri Addenda
 satrapa 279
 Reinhardt's Ptar-
 migan 148
 Rhodostethia 47
 rosea 47
 Rhynchodon 160
 anatum 159
 Rhynchops 58
 nigar 58
 Rhynchopidae 58
 Rice Buntings 206
 Richardson's
 Merlin 160
 Owl 173
 Ring-billed Gull 44
 Ringed
 Murre 18
 Plover 94
 Ringless Plover 95
 Ring-necked Duck
 132
 Riparia 260
 riparia 260
 Risea 41
 tridactyla 41
 River Ducks 123
 Robin, American,
 285
 Rock Ptarmigan
 s 148
 Roseate
 Spoonbill 98
 Tern 53
 Rose-breasted Gros-
 beak 235
 Ross's Gull 47
 Rostrhamus 157
 sociabilis 157
 Rosy
 Finches 225
 Gulls 47
 Rough-legged
 Hawk, American,
 165
 Rough-winged
 Swallow 262
 Royal Tern 50
 Ruby-crowned
 Kinglet 280
 Ruby-throated
 Hummingbird 185
 Rudder Ducks 139
 Ruddy
 Duck 139
 Quail Dove 153
 Sandpiper 70
 Ruff 82
 Ruffed Grouse 147
 Rufous Sparrows
 213
 Rufous-crested
 Duck 130
 Rusty Blackbird
 202
 Rusty Blackbirds
 202
 Rynchophanes 224
 mccownii 224
 Sabine's Gull 48
 Sanderling 77
 Sandhill Crane 111
 Sandpiper,
 Baird's, 73
 Bartramian, 82
 Buff-breasted 83
 Cooper's 73
 Curlew 75
 Green, 80
 Least, 74
 Pectoral, 72
 Purple, 71
 Red-backed, 74
 Smipealmated, 76
 Solitary, 79
 Spotted, 84
 Stilt, 69
 Western, 77
 White-rumper 72
 Sandpipers,
 Buffy, 83
 Curved-billed, 75
 Dunlin, 74
 Fighting, 81
 Highland 82
 Long-legged 69
 Ruddy, 70
 Sandpipers, etc.
 68
 Snipe, 68
 Three-toed, 77
 Tilting, 84
 Semipalmated 76
 Sand Swallows 262
 Sapsucker, Yellow-
 bellied, 176
 Sarcorhamphi 154
 Savanna Sparrow
 220
 Saw-whet Owl 173
 Saxicola 286
 leucorhoa 286
 Saxicolidae 28
 Sayornis 188
 phoebe 189
 sayi 189
 Say's Pheobe 189
 Scitled Petrel 25
 Scarlet-crested
 Woodpecker 180
 Scarlet
 ibis 99
 Tanager 265
 Scaup, 181
 Lesser, 132
 Scissor-tailed Fly-
 catcher 189
 Scissor-tails 186
 Scolecophagus 202
 carolinus 202
 cyanocephalus
 202
 Scolopacidae 64
 Scolopax 66
 rusticolor 66
 Scoter, 136
 American, 136
 Surf, 138
 White-winged,
 137
 Scoters, 136
 Black, 136
 Black and White,
 137
 White-capped, 138
 Scott's Sea-side
 Sparrow 214
 Scotiaptrex 171
 cinera 171
 Screech Owl 173
 Florida, 173
 Seiuridae 256
 Seiurus
 aurocapillus 256
 moticella 257
 noveboracensis 256
 n. notabilis 257
 Semipalmated
 Plover 93
 Sandpiper 93
 Sandpipers 93
 Tatlers 93
 Setophaga 255
 rutililla 255
 Sharp-billed Warb-
 lers 258

- Sharp-shinned Hawk 162
 Sharp-tailed Grouse 149
 Prairie, 149
 Sharp-tailed Sparrow 219
 Arcadian 220
 Nelson's 220
 Shearwater,
 Audubon's, 24
 Cory's, 24
 Greater, 23
 Manx, 24
 Sooty, 24
 Shearwaters 23
 Shore Birds 59
 Short-billed
 Geese 142
 Grebes 13
 Marsh Wrens 276
 Rails 115
 Short-eared Owls 17
 Short-tailed
 Doves 132
 Hawks 165
 Terns 56
 Short-winged
 Hawks 162
 Shoveller 128
 Shrike,
 Loggerhead, 266
 Northern, 266
 Northern Loggerhead 266
 Shrikes, Gray, 265
 Sialia 286
 sialis 286
 s. grata 287
 Silk Buntings 207
 Single-ringed
 Plover 92
 Singing Perchers 192
 Siskin, Pine, 227
 Siskins 227
 Sitta 277
 canadensis 278
 carolinensis 272
 c. atkinsi 278
 pusilla 279
 Sittidae 277
 Skimmer, Black, 58
 Skimmers 58
 Skua 38
 Skuas 37
 Skuas and Saegeris 37
 Sky-lark 192
 Sky-Larks 192
 Slate-colored Junco 214
 Slaty Gallinules 117
 Slender-billed
 Grebes 12
 Small-headed Flycatcher 287
 Smew 123
 Smews 122
 Snipe,
 European, 69
 Sandpipers 68
 Wilson's 67
 Snipes 66
 Snowbirds 214
 Snow
 Bunting 223
 Buntings 223
 Goose 141
 Goose, Greater, 141
 Goose, Lesser, 141
 Snowy
 Egret 105
 Owl 174
 Solitary
 Sandpiper 79
 Vireo 269
 Somateria 135
 dresseri 135
 d. borealis 136
 Songless Perchers 186
 Song Grosbeaks 230
 Songless Perchers 186
 Song Sparrow 211
 Sooty
 Shearwater 24
 Tern 55
 Southern
 Downy Woodpecker 178
 Hairy Woodpecker 178
 Yellow-throat 253
 Sparrow,
 Acadian Sharp-tailed 220
 Bachman's 216
 Brewer's 216
 Chipping, 208
 Clay-colored, 207
 Dusky Seaside, 215
 Field, 219
 Fisher's Seaside 215
 Fox-colored 213
 Golden-crowned 211
 Grasshopper 217
 Harris's 211
 Henslow's 217
 Ipswich, 221
 Lark, 222
 Leconte's 212
 Lincoln's 212
 Macgillivray's Seaside, 219
 Nelson's 219
 Pine-Woods Sparrow 216
 Savanna 220
 Scott's Seaside 218
 Seaside, 218
 Sharp-tailed, 219
 Song, 211
 Southern Grasshopper, 217
 Swamp, 212
 Tree, 208
 Western Field 209
 White-crowned 210
 White-throated 210
 Vesper 221
 Sparrow Hawk
 American, 160
 Cuban, 161
 Sparrows and Finches 207
 Sparrows,
 Arboreal, 207
 Buffy, 216
 Bay-winged, 221
 Grass, 220
 Marsh, 218
 Painted, 232
 Prairie, 222
 Rufous 213
 Song, 211
 Swamp, 212
 Woodland, 216
 Zone-throated, 210
 Spatula 128
 clypeata 128
 Speotyto 174
 hypogaea 174
 floridana, Addenda
 Sphyrapicus 176

- varius** 176
Spine-tailed
 Swifts 184
Spinus 227
 pinus 227
Spizella 207
 breweri 207
 monticola 208
 pallida 209
 p. arenacca 207
 pusilla 209
 socialis 208
Spiza 207
 americana 207
Spoonbill, Roseate,
 98
Spoonbills, Ameri-
 can 98
Spoonbills and
 Ibises 98
Spoon-billed Ducks
 128
Spotted
 Crake 116
 Doves 151
 Sandpiper 84
 Thrushes 281
 Warblers 238
Sprague's Pipet 258
Sprig-tailed Duck
 128
Spruce
 Grouse 146
 Warblers 241
Square-tailed Vul-
 tures 155
Squatarola 89
 squatarola 89
Starling 198
Starlings 198
Starnoenas 153
 cyanocephala 153
Steganopodes 27
Steganopus 60
 tricolor 60
Stelgidopteryx 261
 serripennis 261
Stercorariidae 37
Stercorarius 38
 longicaudus 39
 parasiticus 38
 pomalinus 38
Sterna 51
 dougalli 53
 forsteri 52
 hirundo 51
 paridisaea 53
 tradeauui 51
Sternella 199
 magna 199
 m. argutula 199
 neglecta 200
Sternidae 198
Sternula 54
 antillarum 54
Stiff-tailed Ducks
 139
Stilt,
 Black-necked, 63
 Sandpiper 69
 Sandpipers 68
Stilts 63
Stints 72
Stone Chats 285
Stone Chats and
 Bluebirds 285
Storm Petrels 25
Stormy Petrel 25
Storks 110
Streaked Bitterns
 101
Streaked Warblers
 240
Strigi 169
Strigidae 170
Striped Bitterns
 101
Strix 170
 pratincola 170
Sturnus 198
 vulgaris 198
Sula 29
 bassana 29
 coryi 30
 cyanops 30
 piscator 30
 sula 30
Sulidae 29
Sultana Gallinules
 118
Summer Tanager
 265
Surf Scoter 138
Surnia 173
 caparoch 173
Swainson's
 Hawk 165
 Warbler 151
Swallow,
 American Barn,
 263
 Bahama, 262
 Bank, 260
 Cliff, 260
 Cuban Cliff 261
 Rough-winged,
 261
 White-bellied, 262
Swallows 259
 Cliff, 260
 Green and White
 262
 Long-tailed, 262
 Rough-winged
 261
 Sand, 260
 Tree, 262
Swallow-tailed
 Kite 150
 Swamp Sparrow
 212
Swan,
 Trumpeter, 144
 Whistling, 144
 Whooping, 144
Swans, White, 143
Swift, Chimney,
 184
Swifts, Spine-tail-
 ed, 184
Swimmers,
 Nail-billed, 120
 totipalmate, 27
Sycamore Warbler,
 236
Sylviidae, 278
Sylviocantor, 238
 pennsylvanica
 240
Symphemia 80
 semipalmata 80
Synthiboramphus
 antiquas 21
Syrnium 170
 nebulosum 170
 n. alleni 170
Tanager,
 Louisiana, 265
 scarlet, 265
 summer, 265
Tanagers, Tooth-
 billed 264
Tanagridae 264
Tantalidae 110
Tantalus 110
 loculata 110
Tatlers, 78
 Freshwater, 79
 Semipalmated, 80
Teal,
 Blue-winged, 127
 Cinnamon, 128
 European, 127
 Green-winged,
 126
Teals, Little, 126
Telmatodytes 275
 palustris 275

- p. griseus* 275
p. marinae 275
p. thryophilus
 276
 Tennessee Warbler
 249
 Tern,
 American Black,
 56
 Arctic, 53
 Bridled, 55
 Cabot's 51
 Caspian, 50
 Common, 51
 Foster's 52
 Gull-billed, 49
 Least, 54
 Noddy, 57
 Roseate, 53
 Royal, 50
 Sooty, 55
 Trudeau's 51
 White-winged
 Black, 57
 Terns, 48
 Crested, 50
 Dusky-backed, 55
 Giant, 49
 Gull, 49
 Little, 54
 Pale-backed, 51
 Short-tailed, 56
 Terracantor 245
 hypochrysea 245
 palmarum 245
 Tetronidae 146
 Thalaissogeron 22
 culminatus 22
 Thalassius 49
 caspia 50
 Thick-billed Grebes
 13
 Thicket Warblers
 251
 Thasher, Brown,
 273
 Thrashers 271
 Three-toed
 Sandpipers 77
 Woodpeckers 179
 Thrush,
 Bicknell's 283
 Grey-cheeked, 283
 Hermit, 282
 Louisiana Water,
 257
 Newfoundland,
 284
 Olive-backed, 283
 Red-winged, 284
 Water, 236
 Wilson's, 283
 Wood, 281
 Varied, 285
 Thrushes 281-284
 Spotted 281
 Wagtail 256
 Western 285
 Thryomanes 273
 bewickii 274
 Thryothorus 273
 ludovicianus 273
 l. miamensis 273
 Tilting Sandpipers
 84
 Tinnunculus 160
 domenicensis 161
 sparverius 160
 tinnunculus 161
 Titmice 196-197
 Titmouse, Tufted,
 197
 Tooth-billed
 Merganser 120
 Tanager 204
 Totanus 78
 flavipes 78
 melanoleucus 78
 nebularius 79
 Totipalmate Swim-
 mers 27
 Towhes,
 Arctic, 214
 Florida, 214
 Red-eyed, 213
 Townsend's Warb-
 ler 243
 Toxostoma 271
 rufum, 273
 Traill's Flycatcher
 191
 Tree
 Ducks 143
 Orioles 201
 Sparrow 208
 Swallows 262
 Tri-colored Wood-
 peckers 177
 Orioles 201
 Tringa 70
 canutus 70
 Tringidae 68
 Trochli 184
 Trochilidae 185
 Trochilus 185
 colubris 185
 Troglodytes 274
 aedon 274
 a. parkmani 274
 Troglodytidae 273
 Tropic Bird,
 Red-billed, 28
 Yellow-billed, 28
 Tropic Birds, 27
 Long-tailed, 28
 Troupial 200
 Troupials 200
 Trudeau's Tern 51
 True Rails 113
 Woodpeckers 176
 Trumpeter Swan
 144
 Tryngites 83
 subrubicollis 83
 Tube-nosed Swim-
 mers 21
 Tubinares 21
 Tufted Puffin 20
 Turdidae 281
 Turdus 280
 iliacus 280
 Turkey
 Florida, 150
 Vulture 154
 Wild 150
 Turnstone 96
 Turnstones 95-96
 Tympanuchus 149
 americanus 149
 cupido 149
 Tyrannidae 186
 Tyrannus 187
 dominicensis 188
 tyrannus 187
 verticalis 188
 Tyrant Flycatchers
 186
 Unspotted
 Thrushes 285
 Uria 17
 lomvia 18
 ringvia 18
 troie 18
 Urinatorides 14
 Vanellus 89
 vanellus 89
 Varied
 Bunting 233
 Thrush 285
 Velvet Scoter 138
 Vesper Sparrow
 221
 Vireo,
 Bell's 270

- Black-whiskered
 267
 Key West, 270
 Mountain 267
 Philadelphia, 268
 Plumbeous 269
 Red-eyed, 267
 Solitary, 269
 Warbling, 268
 White-eyed 269
 Yellow-throated
 268
 Vireo
 noveboracensis
 269
 maynardi 270
 Vireocantor 242
 townsendi 243
 virens 242
 Vireos, 267
 Banded, 268
 Little, 269
 Wood, 267
 Vireosylva 267
 barbatula 267
 gilva 268
 olivacea 267
 philadelphia 267
 Vironidae 207
 Virginia Rail 114
 Vulture,
 Black, 155
 Eagles 168
 Turkey, 154
 Vultures,
 American, 154
 Dusky, 154
 Naked-breasted,
 154
 Square-tailed, 155
 Wagtail, White,
 258
 Wagtails, 258
 Wag-tails, Wood,
 256
 Wag-tails and Pip-
 ets 257
 Waders, Noddy-bill-
 ed, 144
 Warbler,
 Audubon's, 237
 Bachman's, 249
 Bay-breasted, 241
 Black and White,
 235
 Black and Yellow
 238
 Blackburnean,
 242
 Black-poll, 240
 Black-throated
 Blue, 236
 Black-throated
 Green, 242
 Blue Mountain,
 287
 Blue-winged, 248
 Blue Yellow-back
 247
 Brewster's, 248
 Canadian, 254
 Cape May, 238
 Carbonated, 287
 Carn's, 236
 Caerulean, 239
 Chestnut-sided,
 240
 Cincinnati, 251
 Connecticut, 251
 Florida Pine, 244
 Golden-winged,
 248
 Hooded, 253
 Kentucky, 251
 Kirtland's 243
 Lawrence's 248
 Mourning, 252
 Nashville, 249
 Northern Blue
 Yellow-back, 247
 Orange-crowned,
 249
 Pine, 244
 Prairie, 246
 Prothonotary, 250
 Red-poll, 245
 Swainson's 251
 Sycamore, 236
 Tennessee, 249
 Townsend's 243
 Western Blue
 Yellow-back, 247
 Wilson's 254
 Worm-eating, 250
 Yellow, 246
 Yellow Red-poll,
 245
 Yellow-rumped,
 237
 Yellow-throated,
 235
 Warblers 279
 American, 234
 Ashy, 252
 Azure, 238
 Blue, 236
 Buffy, 250
 Bush, 239
 Creeping, 235
 Field, 243
 Flycatching, 253
 Golden, 246
 Green, 242
 Ground 245
 Honey, 237
 Long-billed, 235
 Warblers,
 Long-winged, 251
 Little, 247
 Orange, 250
 Painted, 254
 Plain 251
 Scrub, 246
 Spotted, 238
 Spruce, 241
 Sharp-billed, 248
 Streaked, 240
 Thicket, 251
 Wood, 237
 Warbling Vireo,
 268
 Ward's Heron, 104
 Water Thrush, 256
 Grinnell, 256
 Louisiana, 257
 Waxwing,
 Bohemian, 264
 Cedar, 263
 Waxwings 263
 Wedge-tailed Pet-
 rels 25
 Welch's Ptarmigan
 149
 Western
 Blue Yellow-back
 247
 Field Sparrow
 209
 Horned Owl 172
 Meadow Lark
 200
 Red-tail 164
 Sandpiper 77
 Thrushes 285
 Whippoorwill 182
 Whippoorwills 182
 Whimbrel 87
 Winter Wren 275
 Whistling Swan
 144
 White
 Eagles 167
 Geese 140

- Gyr Falcon 158
 Heron 104
 Ibis 99
 Pelican 31
 Swan 142
 Wagtail 170
 White-bellied
 Nuthatch 277
 Swallows 262
 White-capped
 Scoter 138
 White-crowned
 Sparrow 210
 White-eyed Vireo
 269
 White-faced Glossy
 Ibis 100
 White-fronted
 Goose 141
 White-rumped
 Sandpiper 72
 White-tailed Kite
 157
 White-tailed Kites
 157
 White-throated
 Sparrow 210
 White-winged
 Black Tern 57
 Crossbill 229
 Scoter 137
 Whooping Crane
 112
 Wide-mouthed
 Hawks 166
 Widgeon 126
 Widgeons 125
 Wild Turkey 150
 Willet 80
 Willow Ptarmig-
 nam 148
 Wilsonia 253
 canadensis 254
 minuta 287
 mitrata 254
 pusillus 254
 Wilson's
 Thrush, 283
 Petril 26
 Phalarope 60
 Plover 95
 Winter Wren 275
 Woodcock
 American, 65
 European, 66
 Woodcocks,
 Broad-quilled, 66
 Narrow-quilled,
 65
 Woodcocks and
 Snipes 66
 Wood
 Ducks 129
 Grouse 146
 Ibis 110
 Ibises 110
 Pewee 189
 Thrush 170
 Vireos 267
 Wagtails 256
 Warblers 237
 Woodpecker,
 American Three-
 toed, 179
 Arctic Three-
 toed, 179
 Cockaded, 179
 Downy, 178
 Hairy, 178
 Ivory-billed, 180.
 Northern Hairy,
 178
 Northern Pileat-
 ed, 180
 Pileated, 180
 Red-bellied, 177
 Red-headed, 177
 Southern Downy,
 178
 Southern Hairy,
 178
 Woodpeckers, 176
 Banded, 177
 Black, 180
 Black and White,
 178
 Mottled, 176
 Scarlet-crested,
 180
 Three-toed, 179
 Tri-colored 177
 True, 176
 Worm-eating
 Warbler 250
 Wren,
 Bewick's, 274
 Carolina, 273
 Florida, 273
 House, 274
 Long-billed
 Marsh, 276
 Loisanna Marsh
 276
 Marian's Marsh
 276
 Western House,
 274
 Winter, 275
 Worthington's
 Marsh, 276
 Wrens, 273
 House, 274
 Little, 275
 Long-tailed
 Marsh, 275
 Meadow, 275
 Mocking, 273
 Wurdemann's
 Heron, 107
 Xanthocephalus
 202
 xanthocephalus
 202
 Xema 48
 sabina 48
 Yellow-bellied
 Flycatcher 192
 Sapsucker, 176
 Yellow-billed
 Albatrosses 22
 Cuckoo 175
 Tropic Bird 28
 Yellow-breasted
 chat, 255
 Yellow-crowned
 Night Heron, 109
 Yellow-headed
 Blackbird 102
 Blackbirds 102
 Yellow legs,
 Greater, 79
 Lesser, 79
 Yellow-nosed (Al-
 batross 22
 Yellow
 Rajl 116
 Redpoll 245
 Warbler 246
 Yellow-rumped
 Warbler 237
 Yellow-throated
 Warbler 235
 Vireo 268
 Yellow-throat,
 Maryland, 253
 Northern, 253
 Southern, 253
 Yellow-throats,
 252
 Yphantas 201
 galbula 201
 Zaelodia 230
 ludoviciana 230

| | | |
|-------------------|---------------------|----------------|
| melanocephala 231 | macroura 151 | albicollis 210 |
| Zanaida 152 | Zone-throated Spar- | coronata 211 |
| zanaida 152 | rows 210 | querula 211 |
| Zanaida Dove 152 | Zonotrachia 210 | leucophrys 211 |
| Zenaidura 151 | | |



ADDENDA including CORRECTIONS.

Page 22, after Yellow-billed Albatrosses, for Thalassogeron read Thalassogeron.

Page 33, after DOUBLE-CRESTED CORMORANT, for D read P.

Page 40, after Ice Gulls, for Gavia read Pagophila, and next line below after IVORY GULL for G. read P.

Page 48, Fig. 57, insert **F** before the ,.

Page 58, after BLACK SKIMMER, for NIGAR read NIGRA.

Page 60, Fig. 75, for b read a.

Page 64, Fig. 83, for b read c.

Page 64, after WOODCOCKS AND SNIPES, for Scolecopacidae, read Scolopacidae.

Page 66, for Fig. 58, read Fig. 85, and for b read a.

Page 69, after Long-legged Sand-pipers, for Micropalma, read Micropalama.

Page 70, Fig. 89, for B read D.

Page 71, Fig. 90, " " " " .

Page 73, Fig. 91, insert e between D and 2.

Page 79, Fig. 94, for f read j.

Page 89, near center, for C read E.

Page 91, insert AMERICAN between 1 and GOLDEN.

Page 94, after BELTED PIPING PLOVER, for CIRCUMCINTA, read CIRCUMCINCTA.

Page 174, after description of Burrowing Owl add,

1* FLORIDA BURROWING OWL, S. H. FLORIDANA. Differs from 1 in being nearly pure white below and the spottings above are white. Resident in Fla.

Page 188, under Crested Flycatcher, 2d line, for, Breeds through eastern U. S. north into southern Canada, read, Breeds in Fla.

Page 188 below description of Crested Flycatcher add,

1* NORTHERN CRESTED FLYCATCHER, M. C. BOREUS. Similar to 1 but differs in being generally paler and in having a smaller, less strongly curved bill. Breeds in eastern U. S. from Fla. north into southern Canada.



APPENDIX.

The following species are chiefly of occasional or accidental occurrence and are not given in the first edition.

EARED GREBE, *C. californicus*,

Smaller than Horned Grebe (p. 13), bill smaller and more slender: spring adult with a fan-shaped patch of rufous on side of head. Western N. A., east to Ill.

PINTADO PETREL, *Daption capense*.

Large, 15; head, wings, tip of tail, and mottlings on back, black; otherwise, including patch on wing, white. Southern Oceans, accidental on the coast of Me.

ALLIED SHEARWATER, *P. assimilis*.

Smaller than Audubon Shearwater (p. 24), with black of head not extending below eye. Australian Seas; accidental on Sable Island, N. S.

HAWAIIAN PETREL, *O. castro*.

Similar to Leach Petrel (p. 26), but with the tail less forked. Pacific Ocean; accidental in Ind. and District of Columbia.

WHITE-BELLIED PETREL, *Fregetta grallaria*.

A little larger than Wilson Petrel (p. 26), but differs in having belly and under tail coverts white. Intertropical Seas, casual on Coast of Fla.

WHITE-FACED PETREL, *Pelagodroma marina*.

Smaller than last, more ashy above; forehead, stripe over eye, and under parts white. Southern Oceans, accidental off the Coast of Mass.

SHORT-BILLED GULL, *L. branchyrhynchus*.

Differs from Ring-billed Gull (p. 44) in being darker above; no band on bill which is green with tip yellow, and is shorter. Young difficult to distinguish in field. Pacific Coast, accidental on Northern Atlantic Coast.

WESTERN WILLET, *S. inornatus*.

Larger than Willet (p. 80), bill longer; more finely and less distinctly banded, especially below and on middle tail feathers; more or less tinged with salmon below. Interior of N. A., wintering on South Atlantic and Gulf Coasts.

LITTLE BROWN CRANE, *G. canadensis*,

Smaller than Sandhill Crane (p. 111), about 35.00. Northern N. A. from Alaska to Hudson Bay; accidental on the Mississippi.

WAYNE CLAPPER RAIL, *R. c. waynei*.

Scarcely to be distinguished from Clapper Rail (p. 114) in the field. Salt marshes of Atlantic Coast from N. C. to Fla.

RUDDY SHELDRAKE, *Casarca ferruginea*.

Size and general color of Mallard (p. 123), but with a knob at base of bill. Old World, accidental in Greenland.

BEAN GOGSE, *A. fabalis*.

Size of White-fronted Goose (p. 141), but differs in having an orange band on middle of bill. in being darker without white on face, or black spots on breast; Feet, orange. Old World, accidental in Greenland.

PINK-FOOTED GOOSE, *A brachyrhynchus*.

Differs from last in being smaller. 28.00; patch on the bend of wing, gray; upper mandible, pink in center. Old World; accidental in Greenland.

STELLERS EIDER, *Polysticta stelleri*.

Size. 16.50; ♂ black with head, upper neck, and lines on back, white; space around eye, brown; speculum, violet-blue. ♀, duller. Arctic Coast east to Greenland.

HUDSONIAN SPRUCE PARTRIDGE, *C. c. canadensis*.

Similar to Spruce Grouse (p. 146), but darker. Labrador and westward in same latitude.

WHITE-WINGED DOVE, *Melopelia asiatica*.

Length, 11.50; tail, short, not pointed. ♂ gray-brown, black spot on side of head; conspicuous white patch on wing. ♀ duller. Western U. S., accidental at Key West.

BERMUDA GROUND DOVE, *C. bermudiana*.

Similar to Bahama Ground Dove (p. 153), smaller with bill wholly black. Bermuda.

MEXICAN GOSHAWK, *Asterina plagiata*.

Length, 17.00; form, much as in the Buzzard Hawks (p. 163.); ashy above, white below banded with dusky; upper tail coverts, white; tail, black with two or three bars of white. Young, browner above, several dusky bars on tail. Mexico and southward. accidental in Ill.

LABRADOR HORNED OWL, *B. v. heterocnemis*.

Quite similar to Dusky Horned Owl (p. 172). Labrador.

GROOVE-BILLED ANI, *C. sulcirostris*,

Bill, grooved: otherwise much like Ani (p. 175). S. A. north to Tex.; casual in Fla.

NEWFOUNDLAND WOODPECKER, *D. terraenovae*.

Differs from Hairy Woodpecker (p. 178) in having the white wing spots smaller and white of dorsal stripe and tail feathers spotted with black. Newfoundland,

WESTERN NIGHTHAWK, *C. v. henryi*.

Differs from Nighthawk (p. 183) in having the white spots above larger. Western U. S., occasionally east to Ill.

VEMILLION FLYCATCHER, *Pyrocephalus mexicanus*.

Length, 6.00. ♂, head and beneath, scarlet-vermillion. Brown above. ♀, gray-brown above; dull white beneath, tinged with scarlet behind. S. Western U. S. accidental in Fla.

HOYT HORNE LARK, *O. hoyti*.

Differs from Prairie Horned Lark (p. 193) in being larger and in having a pale yellow spot on middle of white throat. Interior of British America, south in winter to the Middle West; occasionally east to Ohio, Long Island, and Mass.

HOODED CROW, *C. cornix*.

Differs from Crow (p. 197) in being gray on back and under parts. Europe, casual in Greenland.

ROOK, *C. frugilegus*.

Resembles Crow, but differs in having no feathers about base of bill. where skin is whitish. Europe, accidental in Greenland.

BULLOCK ORIOLE, *I. bullocki*.

Differs from Baltimore Oriole (p. 201) in having orange of throat extending upon sides of head, large white patch

on wing; tip of tail. black. ♀, grayer: broad white bands on wings. Western U. S.; accidental in Me.

CLARK NUTCRACKER, *Nucifraga columbiana*.

Size of Blue Jay. (p. 194); bill. longer and more pointed; gray, wings and tail, black. patch on former and spot on outer feathers of latter, white, Western N. A.; accidental in Wis.

ACADIAN CHICKADEE, *P. h. littoralis*,

Differs from Hudsonian Chickadee (p. 197) in being smaller. Southeastern British Possessions; south in winter into N. E.

TOWNSEND CHICKADEE.

Differs from last in being darker throughout; no rufous on sides below. Coast region of Labrador; south in winter into N. E.

YELLOW-GREEN VIREO, *V. flavoviridis*.

Differs from Red-eyed Vireo (p. 267) in being brighter green above; under parts much tinged with dull yellow; sulphur-yellow on under tail coverts and wing lining. Mexico and southward; accidental in Quebec, Canada.

WAYNE WARBLER, *V. v. waynei*.

Differs from Black-throated Green Warbler (p. 242), in being smaller; duller in color, less black on throat, and yellow markings paler. Breeds in S. C. Recently described by Mr. Outram Bangs.

PRAIRIE MARSH WREN, *T. p. illiacus*.

Differs from Long-billed Marsh Wren (p. 275) in being more rusty above and on flanks. Great plains and prairies of central U. S.; south in Winter to western Fla.; casual in Carolinas and Va.

CAROLINA NUTHATCH, *S. a. litorea*.

Differs from the Florida White-breasted Nuthatch in being paler and in having the rufous of flanks not as extended. Coast region of the Carolinas.

TOWNSEND SOLITARIE., *Myadestes townsendi*.

Length, 7; brown-gray; wings and tail. darker; patch of yellow-buff near base of wing and a lighter patch behind this with a darker space between the two; spot on outer tail feathers, white. Mountains of western U. S.; accidental in Ill.

WILLOW THRUSH, *H. f. salicicola*.

Differs from Wilson Thrush (p, 283) in being duller above and with spottings on breast a little darker. Interior of U. S.: south to Mo., Ind., Ill., and rarely to S. C.

SOUTHERN ROBIN, *P. m. achrusterus*.

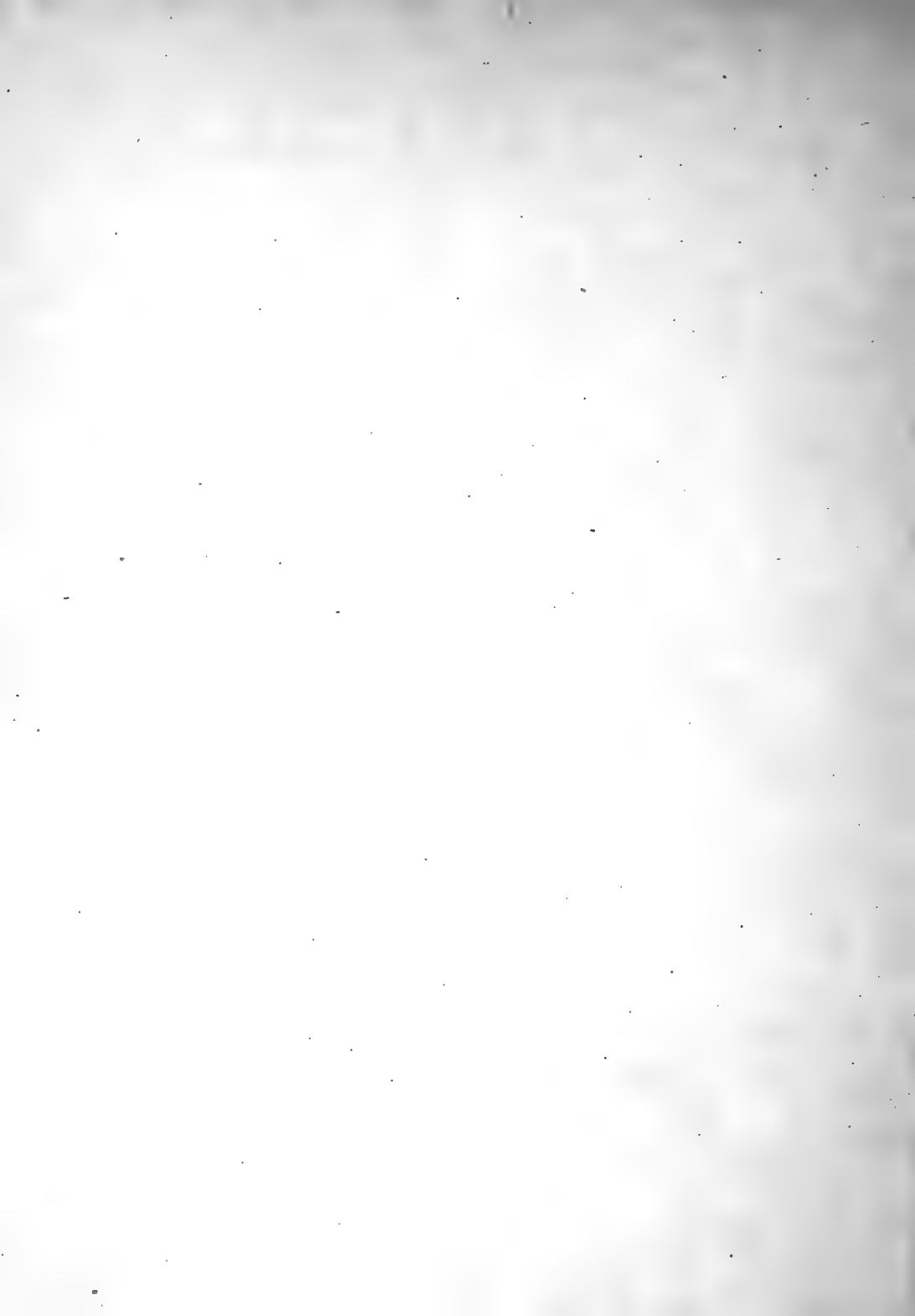
Differs from Robin, (p. 285) in being smaller, paler, and duller. Young, less heavily spotted. Breeds from S. C, north to Md. and southern Ill.

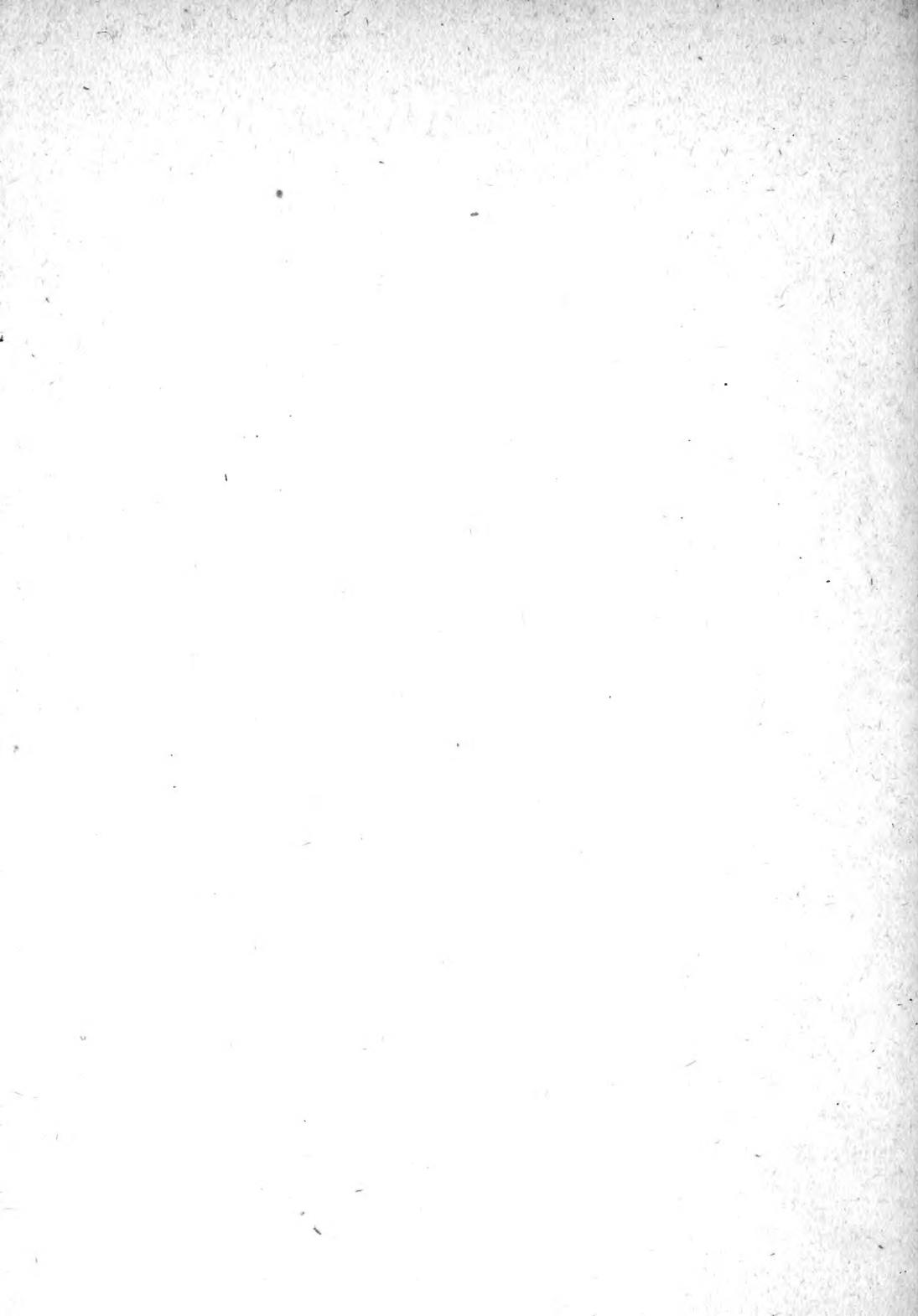
BAHAMA PINTAIL, *D. bahamensis*.

Smaller than Pintail (p. 129), 19.00; tawny, mottled and streaked with brown; speculum, green, black. and tawny; throat and sides of head, white; a triangular spot on either side of upper mandible, lake-red. Bahamas and Antilles; accidental on Key West, Fla.









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